HEALTH SEEKING BEHAVIOR OF WOMEN DURING THEIR ANTENATAL, INTRANATAL AND POSTNATAL PERIOD IN A RURAL AREA OF COIMBATORE DISTRICT: A COMMUNITY BASED CROSS SECTIONAL STUDY

DISSERTATION SUBMITTED TO

THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI

IN PARTIAL FULFILLMENT OF THE REGULATIONS FOR THE AWARD OF

M.D. DEGREE IN COMMUNITY MEDICINE

DEPARTMENT OF COMMUNITY MEDICINE

PSG INSTITUTE OF MEDICAL SCIENCES & RESEARCH

PEELAMEDU, COIMBATORE -641004

TAMILNADU, INDIA

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DECLARATION

I**, Dr.T Uma Priyadharsini**, do hereby declare that the thesis entitled **"HEALTH SEEKING BEHAVIOR OF WOMEN DURING THEIR ANTENATAL, INTRANATAL AND POSTNATAL PERIOD IN A RURAL AREA OF COIMBATORE DISTRICT: A COMMUNITY BASED CROSS SECTIONAL STUDY** is a bonafide work done by me under the guidance of**Dr.M SIVAMANI, (Guide)**Professor, Community Medicine, **Dr. S KARTHIKEYAN**,**(Coguide)**Assistant Professor, PSG Institute of Medical Sciences and Research.

This study was performed in the catchment area of RHTC, PSG Institute of Medical Sciences & Research, Coimbatore, under the aegis of The Tamilnadu Dr MGR Medical University, Chennai, as part of the requirement for the award of the MD degree in Community Medicine.

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Date:

CERTIFICATE

PSG INTITUTE OF MEDICAL SCIENCES & RESEARCH
COIMBATORE

This is to certify that the Dissertation work titled **"HEALTH SEEKING BEHAVIOR OF WOMEN DURING THEIR ANTENATAL, INTRANATAL AND POSTNATAL PERIOD IN A RURAL AREA OF COIMBATORE DISTRICT: A COMMUNITY BASED CROSS SECTIONAL STUDY"** is the bonafide work of **Dr. T.Uma Priyadharsini** done by her in the Department of Community Medicine, PSG Institute of Medical sciences and Research, Coimbatore in partial fulfillment of the regulations for the award of M.D. Degree in Community Medicine

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LIST OF ABBREVIATIONS

WHO	World Health Organization
SES	Socio-Economic Status
CPI	Consumer Price Index
DALY	Disability Adjusted Life years
ANC	Antenatal Care
SBA	Skilled Birth Attendant
PNC	Postnatal Care
NFHS	National Family health Survey
DLHS	District Level household Survey
(RMNCH+A)	Reproductive, Maternal, New born, Child health + Adolescent Programme
ICMR	Indian Council of Medical Research
NRHM	National Rural Health Mission
MCH	Maternal and Child Health

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1. INTRODUCTION

Maternal health refers to the health of a woman during her pregnancy, childbirth and the postpartum period.[1] The World Health Organization (WHO) reports that about 813 women die from pregnancy and its sequelae every day throughout the

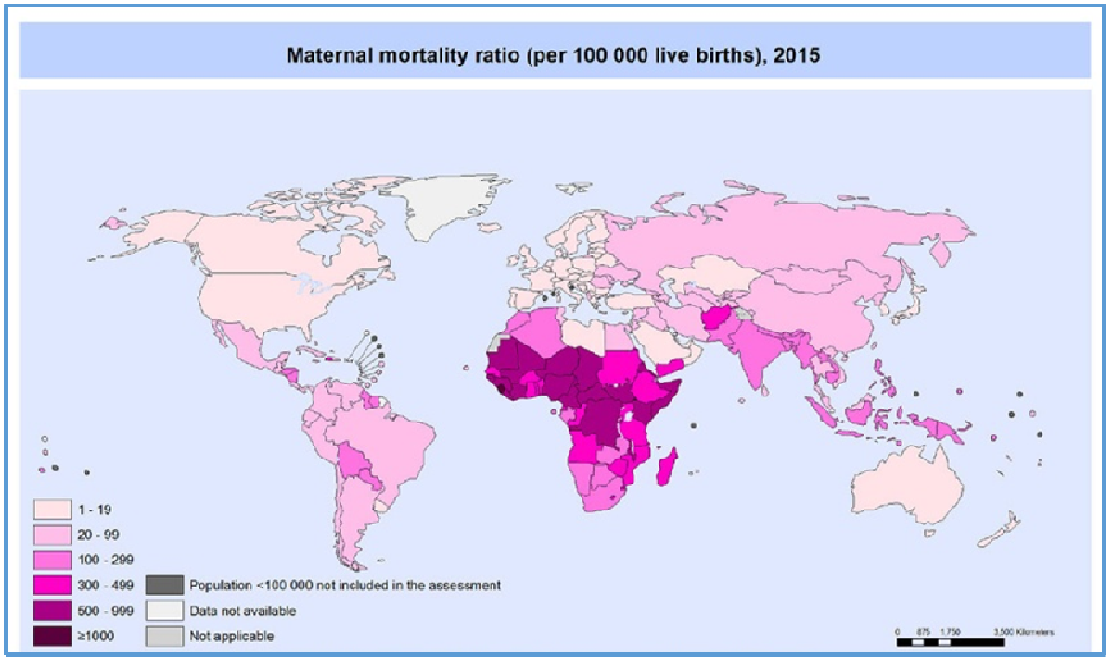
world. Out of the 3, 03,000 maternal deaths which occurred worldwide during the year 2015, almost all deaths were preventable and hailed from low resource settings.

The Sustainable Development Goals were developed with an aim of promoting the wellbeing of all age groups, particularly the vulnerable groups with a target of reducing the global maternal mortality ratio to less than 70 deaths per 1 lakh live births before 2030.[2]

1.1. MATERNAL MORTALITY: THE DEVELOPING COUNTRIES

Almost 99% of the global maternal deaths occur in the developing countries and South Asia contributes about one third to it. The maternal mortality ratio in developing countries is 249 per one lakh births whereas it is only16 per one lakh births in the developed countries. This difference is primarily due to the high disparities in affordability and accessibility of health services across different countries of the globe[3]. A study by Fortney and Smith in 1997 done in four countries (Africa not included) has estimated that for every maternal death which occurred, the number of women who suffered serious maternal morbidities were estimated as 153 in Bangladesh, 175 in India, 297 in Egypt and 908 in Indonesia.[4]

Figure 1: World Health Organization map showing Maternal Mortality ratio between countries2015



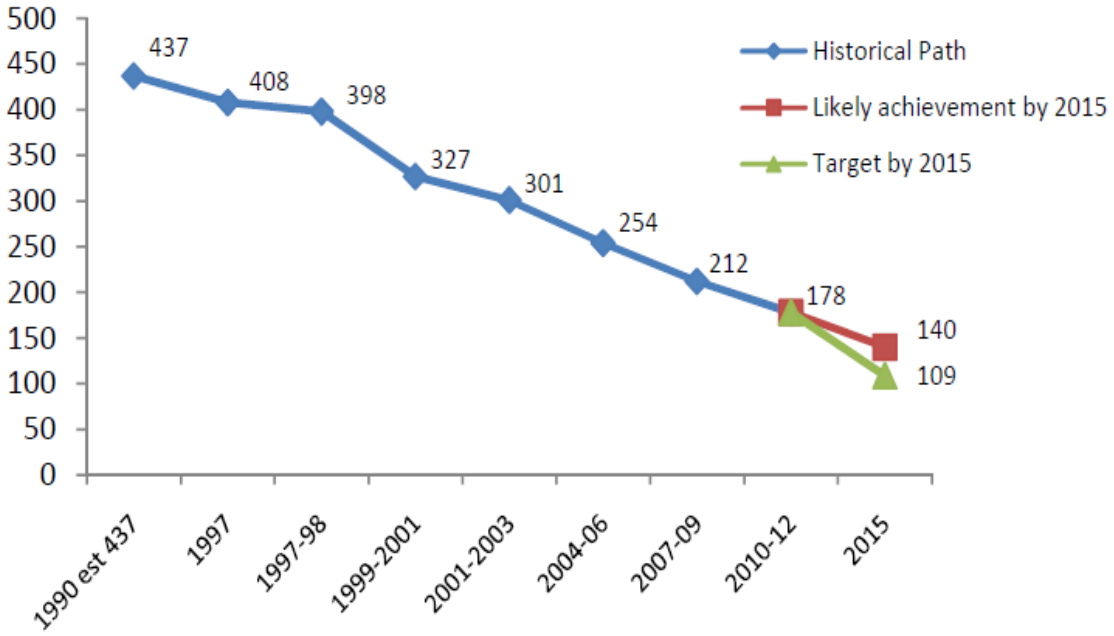
Source: WHO trends in maternal mortality 1990 to 2015

The World Bank report 1993 concludes that investments in the heath sector accounts for increased economic and social benefits in a country. Specifically, investments in maternal health services is likely to have great returns as the incremental costs incurred by those services are relatively lesser than the economic benefits attained and the DALY s (Disability adjusted Life years) saved [5]. As per the World health report 2005 by the WHO, it has been studied and derived from the scenario in 75 countries that the incremental costs for improving the maternal and newborn health services from the then existing coverage of 43% in 2006 to 73% in 2015 had consumed an additional investment of 1.18$ per capita.[6]

1.2. MATERNAL MORTALITY – THE INDIAN SCENARIO

According to the latest report of the Registrar General of India, Sample Registration System (RGI-SRS), Maternal mortality in India has shown a considerable decline from 212 per 100,000 live births in the period 2007- 09 to 167 per 100,000 live births in the period 2011-13.[7]. However, India has reached an MMR of 140/100000 live births by 2015, missing the Millennium Development Goal-5 target of 109/100000 live births by 31 points.[8]

Figure 2: Trend in Maternal Mortality Ratio in India 1990-2015



Source: Sample registration System, Office of the Registrar General of India

Though the country has taken up several important initiatives in the field of maternal health like Reproductive and Child Health (RCH) Programme , National Rural Health Mission (NRHM), the reduction of MMR in the country is not up to satisfactory levels which is very well evident from its failure to achieve the MDG target of 2015 in reducing maternal deaths. Studies have shown that most of the health determinants that affect maternal morbidity and mortality have a strong association with the **health seeking behavior** among women during their pregnancy and childbirth.[9]

1.3. HEALTH SEEKING BEHAVIOUR: UTILISATION OF THE HEALTH SYSTEM

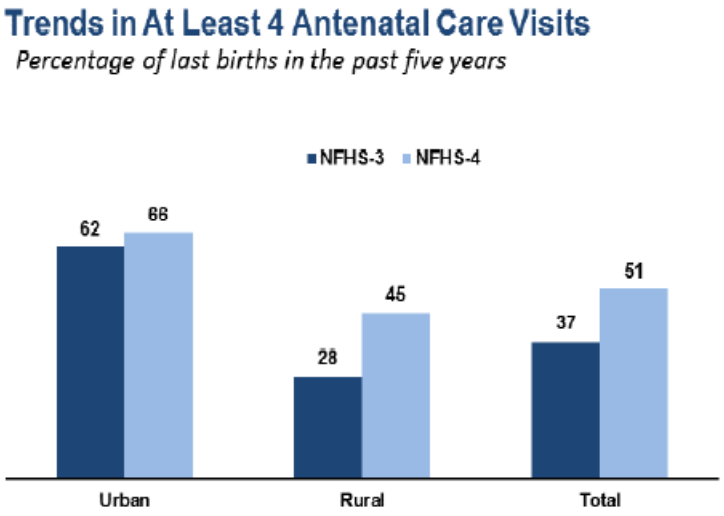
Health seeking behaviour is defined as an action undertaken by individuals who perceive themselves as having a health problem for the sake of finding an appropriate remedy.[10] The multiple determinants of health seeking behaviours not only lie on the individual alone but are a product of various socio demographic factors like age, occupation, education and socioeconomic status and availability and accessibility of health services.[11,12] The World health Organisation states that the numerous individual and socio demographic and cultural factors not only play direct roles but also interact in different possible means to influence the healthcare seeking behaviour of women during their pregnancy and childbirth.[13]

1.4. HEALTH SEEKING BEHAVIOUR AMONG PREGNANT WOMEN:

Underutilisation of the available health services has become one of the most important issues in public health in almost all the low and middle income countries of the world with only 51% of the pregnant women attending antenatal clinics. The

previous decade had a picture where a huge number of deliveries worldwide were conducted by untrained persons as a result of which there were high maternal mortality rates.[14] Maternal mortality continues to be high in India due to an interplay of several factors, the most important of them being inappropriate health seeking behaviour among pregnant women leading to underutilisation of the available health services.[15] The National family health survey 4(2015-16) results have revealed that only 66% of the urban women and 45% of the rural women have had the recommended minimum of four antenatal visits.[16]

Figure 3: Trends in at least 4 visits for Antenatal care in NFHS 3 & 4



The above graph shows that though the NFHS 4 results are more convincing than NFHS 3, we still need to go long way in improving maternal health care utilisation and thereby bringing down maternal morbidity and mortality.

2. THE NEED FOR THE STUDY

India, though has the largest health care infrastructure, it is also the most inadequate health care system in the world.[17] Even after the successful launch of several maternal and child health programmes in our health care system, only 16.7% of women in rural areas have had full antenatal care which is a composite indicator of minimum four antenatal visits, one dose of TT injection and iron folic acid tablets for a minimum of 100 days according to the National family Health Survey.[16]

In a culturally diversified country like India, numerous myths and misconceptions prevail about care during pregnancy and these myths also play a contributory role in acting as a barrier to the utilisation of health services by women. Although an array of services for maternal health are extensively available in a State like Tamilnadu, it is the health seeking behaviour of the women which plays a substantial role in the utilisation of these services. There are several determinants which contribute to health seeking related to the woman like her individual characteristics, the social structure in which she is a part, her decision making power, beliefs, customs, accessibility and affordability related factors which contribute to the health seeking behaviour of a pregnant woman.

Therefore maternal health can be augmented further only by identifying all the prevailing barriers in seeking care during pregnancy which exist in every level of the health care system available. The study captures the health seeking behaviour of women in their reproductive age using a behavioural model for healthcare seeking and utilization of health services, which offers to bring to light the aspects which facilitate or impede health service utilisation.

Hence this Community based study aims at exploring the health seeking behavior of women during their antenatal, intranatal and postnatal period and the

various contributory factors which influence the health seeking behavior of women in the rural field practice area of PSG Institute of Medical Sciences and Research, Coimbatore district, Tamilnadu.

The outcome of the study can help in making evidence based conclusions about the current scenario of the health seeking behavior of pregnant women which may equip policy makers to plan strategies to improve the health care utilization among women of reproductive age group thereby reducing maternal morbidity and mortality.

3. OBJECTIVES

This community based study was done with the following objectives

1. To assess the health seeking behavior among women during their antenatal, intranatal and postnatal period among women in the field practice area of Rural

Health Training Centre (RHTC), Vedapatti, attached to Departmentof Community Medicine, PSG Institute of Medical Sciences and Research, Coimbatore.

2. To determine the factors influencing the health seeking behavior during their antenatal, intranatal and postnatal period among women in the field practice area of RHTC, Vedapatti,

4. REVIEW OF LITERATURE

Maternal health indicators are one the greatest indicators which reflect the status and usage of health services available in a country, its socio economic development and thereby acts as a marker of the country's progress and development in all directions.[18]

4.1. Maternal Health

Maternal health is one of the key areas to be focused upon by any health service initiative in a country since woman and child are the most vulnerable sections who are affected the most by a dysfunctional health system. [19] It cannot be improved as a separate entity. Maternal health can be brought about only in conjunction with simultaneous improvement in comprehensive primary health care which is the sole possible strategy to address all the social determinants of maternal health effectively. [20]

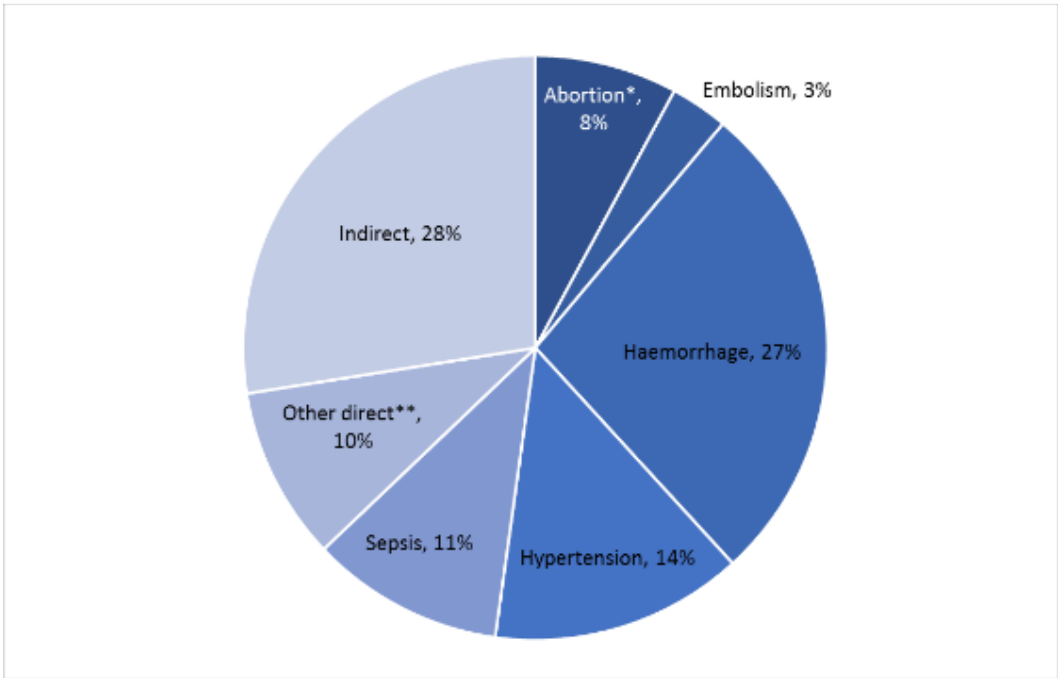
4.2. Maternal Mortality:

4.2.1. Maternal mortality: The Global Scenario:

Maternal Mortality ratio is not uniform throughout the globe. Sub Saharan Africa leads with highest MMR followed by South Asia. The growing birth rates in the developing countries and the high fertility rates indirectly again increase the number of maternal deaths as a result of increase in population.[21, 22] A study by Reichenheim et al has estimated that for every woman who dies during pregnancy about 20 women in the world experience either an acute or a chronic form of maternal morbidity with undesired consequences .[23]

According to the World Health organisation, among all other causes, haemorrhage still remains the most common cause contributing to maternal death globally. It accounts for about 27% of all maternal deaths worldwide.[24]

Figure 4: Global distribution of the causes of maternal death



. **Source: Source: Say L et al. 2014.(WHO)**

4.2.2. Maternal mortality: The Indian Scenario:

India being the second most populous country of the world contributes to about one third of the estimated five lakh maternal deaths which occur every year according to the 2015 report of the Federation of Obstetric and Gynaecological Societies of India. A maternal death in India is mostly not an event which occurs by chance; it has a deep rooted origin among many intertwined factors like economic and social position of women, their deprived autonomy, pattern of health system infrastructure in India, political commitment, heath seeking behavioural issues related to availability and accessibility of services.[25]

According to the 2011-2013 SRS data, India has an MMR of 167 per 100000 live births [SRS 2011-13 report].The high maternal morbidity and mortality in India may be attributed to issues like 1) limited accessibility to skilled obstetric care, 2) Health facilities which lack in essential drugs and equipment and 3) lack of awareness among women about the health services offered by the health facilities.[26]

4.3. Health Seeking Behaviour

Literature shows that health seeking behaviour is commonly employed as a tool in measuring the interaction of a particular population with the health system available. It is also a potential means for an individual to get to know about health promotion, prevention of diseases and the health risks which exist in his body and environment.

Health seeking behaviour can be elicited either by Quantitative research methods like cross sectional studies and Knowledge attitude and Practice studies or by Qualitative research methods like ethnography and In depth interviews.[27]

4.3.1. Maternal health seeking behaviour of women

Women are more prone to complications during pregnancy owing their poor health seeking behaviour in many of the developing countries. This serves as a cause for underutilisation of health services in spite of efficient health policies and programs**.** Several studies show that maternal health seeking behaviour is the result of several interlinking factors like personal, environmental, social, economic, service availability and accessibility related factors.[28]

4.3.2. Maternal health seeking behaviour of women: Global Scenario

Many researchers in the world have revealed the importance of health seeking behaviour in averting maternal complications and death by their studies. The global proportion of women who receive antenatal care has grown from 65% in 1990 to 83% in 2012. Regional studies have shown that receiving antennal care from trained health workers was lowest in South Asia (71%) and highest in Latin America and the Caribean.[29]

A women's decision to seek health is a composite result of her individual needs, social issues, the cost and quality of the persisting health resources and their location.[30] Poor health seeking behaviour among women during pregnancy and underutilisation of available services are a major constraint in developing countries leading to a huge difference between the potential benefits and actual benefits reaped out of the maternal health services.[31]

A systematic analysis done by World health Organisation has found that among the seven studies which explored the urban and rural differences in having a skilled birth attendant during delivery in nine countries**,** five studies showed significant differences favouring urban women towards having skilled birth attendant.[32]

The maternal health seeking behaviour in developing countries is not only challenged by the upcoming non communicable diseases like hypertension and diabetes but also by the already prevailing conditions of poverty, poor environmental hygiene, respiratory diseases and communicable diseases like malaria, dengue and zika which complicate pregnancies further.

Table 4.1: Global studies done on maternal health seeking behaviour.

Reference	Place	Study Population	Sample Size	Study Type	Results
Babalola SO[33] et al 2012	Haiti	Women who delivered during 2007-2012	5417	Cross sectional	69% - At least 4 Antenatal (AN)visits 41.2%- Skilled Birth attendant (SBA) during delivery
Pokhrel BR[34] et al 2009	Nepal	Women who delivered in the last 5 years	200	Cross sectional	24.5% - Institutional delivery 64.2% - At least 4

		preceding the study			Antenatal visits
Umar AS[35] et al 2008	Nigeria	Women who delivered between Jan 2003 and Dec 2008	967	Cross sectional	19.8% - At least 4 AN visits 91% - No SBA
Tarekegn SM[36] et al 2011	Ethiopia	Women who had at least one birth during the 5 years preceding the survey	16515	Cross sectional	34% - AN Visits 11.7%- SBA 9.7%- PN visits
Bassani DG[37] et al 2002	Brazil	Women who gave birth between May and December 2002.	611	Case Control	61% - Adequate Prenatal care 4% - No prenatal care
Jacobs C[38] et al 2012	Zambia	Mothers with children between the ages 0 and 5 months	581	Cross sectional	30%- An Visits 37% SBA 28% - PNC
Titaley CR[39] 2007	Indonesia	Women who delivered in the last 5 years preceding the study	26591	Cross sectional	20%- < 4 AN visits
Koenig MA[40] et al 2001	Bangladesh	All ever married women who delivered three years prior to survey	140323	Cross sectional	12% - Any AN visits 91%- Delivered at non health facility 6%- Government hospital 3%-Private clinic 11%- PN visits

4.3.3. Maternal health seeking behaviour of women: Indian Scenario

Even before two or three decades in India, the deaths related to pregnancy and childbirth has always been unacceptably high owing to several socioeconomic and traditional factors. Though the National health mission has built a positive impact on the maternal health infrastructure and services in India, the development is not uniform throughout our country. Health care services delivery is very diverse in India with urban women gaining more accessthan rural women[41]. Socio economic disparities among women in India play major roles in the determining the health seeking behaviour of women in India. A study by P K Pathak[42] et al in 2010 based on the NFHS data during 1992 to 2006 found that the maternal health seeking behaviour with regard to the prenatal care and skilled birth attendant was significantly lower among poorer mothers in India irrespective of the geographical location and cultural diversities. The study also concluded that the majority of them do not have access to a skilled birth attendant and even if they have access they use the private facilities more than public facilities.[43]

Table 4.2: Indian studies done on maternal health seeking behaviour.

Reference	Place	Study Population	Sample Size	Study Type	Results
Acharya AS[44] et al 2012	New Delhi	Pregnant women attending antenatal clinic of PHC from January to April 2012	417	Cross sectional	81.1%- SBA 42.9%- Early registration 33.1%- At least 4 AN visits
Budimelli S[45] 2013	Godavari district, Andhra Pradesh	Mothers with a child less than 1 year.	150	Cross Sectional	93.3% - received complete antenatal care 76.7% - consumed IFA for 100 days 86%- institutional deliveries

Agarwal P[30] et al	Urban Slum in Delhi	Married women in the age group of 15-45 years who were either pregnant at the time of interview or had delivered within the last 1 year	100	Cross Sectional	24% -did not seek Antenatal care. 15.9%- had postnatal visit 83%- Received two doses of Tt 15.9% - Postnatal visit
Gupta A[46] et al 2010	East Delhi	Women (15-49) years who had at least one child aged 3 years or younger	102	Cross Sectional	76.5%-Three or more ANC visits 16.7% - not taken Iron and folic acid (IFA) tablets 92.2%- of the women had received Tetanus toxoid 51%-Institutional deliveries
Singh S [47] et al 2010	Tamilnadu,	Women in reproductive age group who have given birth	186	Cross Sectional	Not seeking ANC – 53.42% Home delivery- 64.23%
Jose JA[48] et al 2010	Kerala	Women who had delivered between September 2009 and October 2010	70	qualitative study	85% -Tribal antenatal women who utilized maternal health care facilities fully 100%- utilisation among non-tribal women institutional deliveries -
Bhattacherjee S[49] 2012	Darjeeling	who had delivered in last one year and who resided in the study area for more than one year	1020	Cross Sectional	48.6%-full antenatal care 73.5%-institutional delivery 72.6%-adequate postnatal visit

4.4. National Health Programmes for Maternal Health

India was the first country to launch a national health program for Family Planning 1951. The passive clinic oriented approach of the family Welfare programme underwent many evolutions over time thus evolving as the Reproductive

and child health Programme Phases 1 & 2 and the recent RMNCH +A programme under the umbrella of the National health Mission

4.4.1. Reproductive, Maternal, New born, Child health + Adolescent Program (RMNCH+A)

The RMNCH +A was launched in 2013 to address the causes of morbidity and mortality among women and children with a "Continuum of care" on various stages of lifecycle of a woman.[50] The Plus component includes adolescent age group which is a distinct life stage linking child and adult stages. New initiatives like Score card for tracking the performance of the services given, National Iron plus Initiative which addresses the problem of Anaemia in all age groups, and early screening and intervention services for congenital defects and other diseases in children and adolescents.[51]

4.4.2. Janani Suraksha Yojana

It is a conditional cash transfer scheme launched in 2005 by the Government of India which aims at improving institutional birth thereby reducing maternal and neonatal mortality.[52] The programme offers an incentive of 600 rupees in urban areas (1000 in ten high focus sates) and 700 rupees in rural areas(1400 in high focus states) for women who deliver in Government or an accredited health facility. [53]

4.4.3..Muthulakshmi Reddy Maternity Benefit Scheme

This scheme was implemented by the Tamilnadu Government according to which a financial assistance of Rs 12000 is given in three instalments of Rs 4000 to mothers under the below poverty line for the first two deliveries with the objectives of compensating wage loss during pregnancy, to support them in getting nutritious food and prevent low birth weight babies.[54]

4.5. Theories and Models for Health Seeking Behaviour

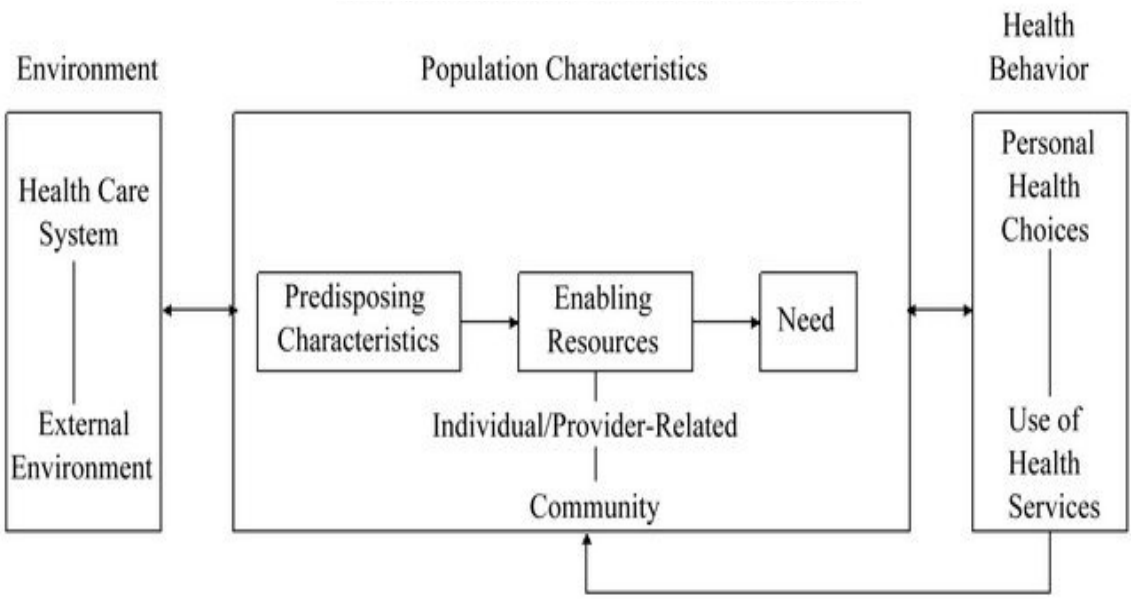
There are many models and theories which have been developed over time for exploring the human health seeking behaviour and service utilisation.[55] The models of health seeking behaviour have attracted policy makers a lot because the success of a health programme or policy is highly dependent on the fact that the policies should be framed in conjunction with the health seeking behaviour of the people in the region where it is launched.[56]One of the popularly used model in community based studies is the Anderson and Newman Health behavioural model.

Table 4.3: Theories / models for health seeking behaviour

Name of the model/ theory	**Developed by**
Edward Suchman pathway Model[57,58],	Edward Suchman, 1965
Health belief Model[59,60]	Rosenstock M, Godfrey M, Howard Leventhal, ,1950
The Three delay Model[61]	Thaddeus and Maine,,1990
Theory of reasoned action and Planned behaviour[62,63]	**Fishbein & Ajzen**, ,1975
Andersen and Newman Health Behavioural Model[64,65,66,67]	Ronald M. Andersen & Newman, 1968

4.6. Andersen and Newman Health Behavioural Model

Figure 5: Andersen and Newman Health Behavioural Model:

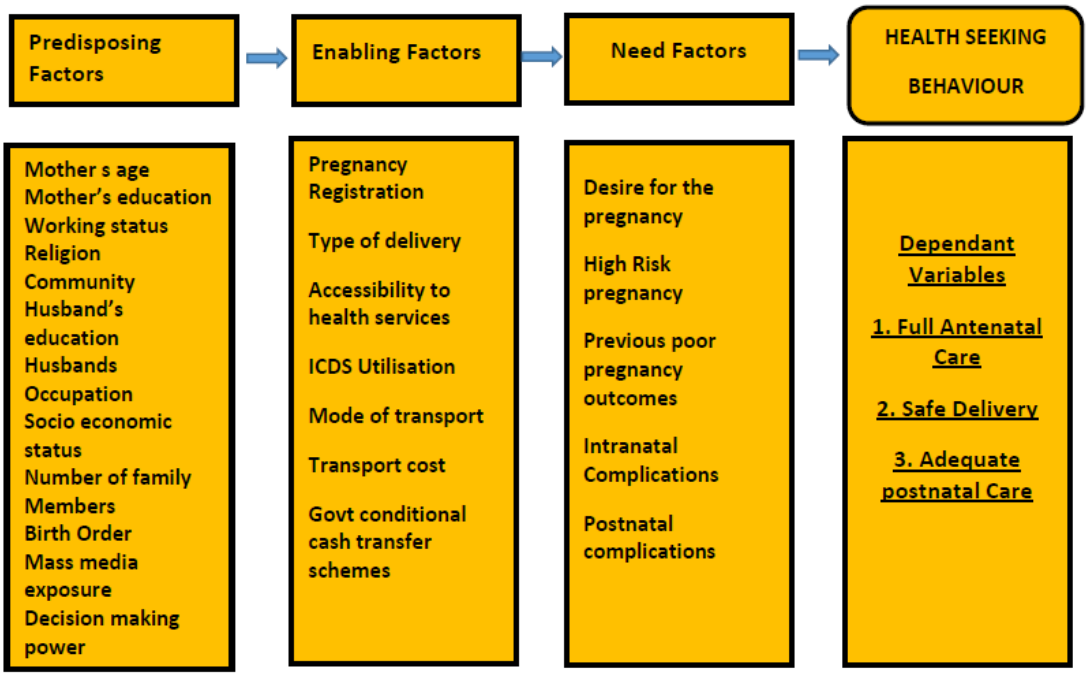


TheAndersen and Newman Health Behavioural model hypothesises that both the **health care system** (resources, organisation) in the external environment and the **characteristics of the population** determines the health behaviour of an individual. The population characteristics play an influential role in the health behaviour of an individual and is an outcome based on of the predisposing, enabling and need factors

4.7. Conceptual framework used in the study:

In the context of maternal health seeking behaviour, the Anderson and Newman behavioural model addresses **Predisposing factors** (e.g. age, religion, education, occupation), **Enabling factors** (e.g. Income, Distance of health facility, cost) and **need factors**(e.g. Desire for pregnancy, pregnancy complications) which determine the maternal health care seeking behaviour of women in the study.

Figure 6: Conceptual framework of Andersen and Newman for studying determinants of health seeking behavior among women during their antenatal, intranatal and postnatal period



4.8. FACTORS INFLUENCING HEALTH CARE SEEKING BEHAVIOUR AMONG WOMEN DURING THEIR ANTENATAL, INTRANATAL AND POSTNATAL PERIOD

The various predisposing, enabling and need factors influencing antenatal health care seeking behavior among women as discussed in various other studies from literature are given below.

4.8.1 PREDISPOSING FACTORS:

4.8.1.1 Maternal Age at childbirth:

The age of the mother at childbirth has a significant bearing on her health seeking behavior. Age has an inverse relationship with health seeking. A study by **Salam et al** [43] by analyzing NFHS 2 data has shown that women of age group 20-34 years have 1.20 time more odds of seeking antenatal care than women more than 34 years.

A study by **Bhattarcharjee et al**[68] in Jharkhand has shown that women who were above 25 years had 2.14 times higher odds of seeking institutional delivery than mothers less than 25 years. (aOR =2.14,95% CI 1.26–3.64)

A study by **Prusty RK et**[29] al in Odisha has reported that mothersinthe age group of 25-34 years had higher odds of seeking postnatal care than mothers in the age group 15-24 years.

4.8.1.2. Mother's education:

Mother's educational status has a contributory role in their health seeking behavior. An educated woman has better awareness and knowledge about the importance of seeking maternal health care and hence seeks appropriate maternal health care during pregnancy. In a study by **Prusty RK**[29] in Odisha in 2008 mothers who were educated more than High school level were 2.23 times more likely to have full antenatal care (a OR = 2.23, 95%CI 1.47-2.32).

A study by **Bhattarcharjee et al**[68] in Jharkhand has shown that women who had education had 2.14 times higher odds of seeking institutional delivery than mothers without higher education (AOR = 1.67, 95 % CI = 1.04–3.07)

In a study by **Prusty RK**[29] in Odisha in 2008 mothers who were educated more than High school level were 1.85 times more likely to seek adequate postnatal care (a OR= 1.85,95% CI 1.48-2.33) than mothers who were educated below High school level.

4.8.1.3. Mother's working status:

Mothers who are not working are more likely to utilize maternal health services than working mothers as evident from literature. A study by **Upadhyaya SK**

et al[69] in Rajasthan in 2013 has found that maternal health care utilisation was 28.5% in housewives when compared to working mothers (9.5%).

But however, a study by **Mahapatro et al**[70] by analyzing NFHS 3 data has shown that the odds of seeking full antenatal care for working women was 1.182 times higher for seeking antenatal care, 1.43 higher for safe delivery and 1.43 times higher foe seeking postnatal care.

4.8.1.4. Religion:

Religion has always been a pivotal factor in determining the health seeking pattern of individuals since it has an influence on ones' beliefs and habits. A study by **SinghPK et** al[71] in nine high focus states in India during 2007-08 found that Muslim women were less likely to take more than four antenatal visits when compared to woman of other religions.

A study by**Battacharjee et al**[68] inDarjeeling in 2012 has found that Hindu women had better odds of institutional delivery with skilled birth attendant and postnatal care.

4.8.1.5. Community:

Though India is a secular and democratic country, discrimination and marginalisation based on social groups and community is extensively prevalent in most parts of the country**.** This also has implications in the health seeking behaviour of the society and the individuals. A study by **Singh PK et al**[67] in nine states in India during 2007-08 has found that women of scheduled caste and tribe have lesser odds of having more than 4 antenatal visits compared to women of other communities.

The study has also showed that women of scheduled caste and scheduled tribes were less likely to go for institutional deliveries and less likely for postnatal care.

A study by **Kumar P et al**[41] based on DLHS 3 data has found that the women of other castes had more odds of having safe delivery (aOR = 1.77, CI = 1.73-1.81) and two times more odds of utilising postnatal services (OR= 1.74, CI= 1.69-1.78) than women who belong to scheduled castes and tribes

4.8.1.6. Husband's Education:

The educational status of the husband also has a significantrole in maternal health seeking as the awareness and knowledge about the importance of seeking health care during pregnancy is well understood in case of husbands with higher educational status. In a study by **Paudel DP et al**[72] Belgaum in Karnataka in 2013 has shown that mothers whose husbands were educated had 2.3 times higher odds of utilising antenatal services.(a OR= 2.13, CI 5.208-11.60).

As study by **Vora KS et al**[73] in Gujarat and Tamilnadu has revealed that in Gujarat mothers whose husbands were having education High School and above had 1.4 times higher chances of institutional delivery.(a OR = 1.44, CI 1.03-2.02).

A study by **PK Singh et al**[73] in 2005 which analysed NFHS data 3 from all 29 Indian states has shown that the postnatal care seeking behaviour was 43% among mothers with husbands with educational status above high school whereas it was 28% among mothers with husbands educated below high school.

4.8.1.7. Husband'sOccupation:

The occupation of the husband has a bearing on the maternal health seeking behaviour as evident from literature. Husbands with higher level occupations extend more support to the women for seeking maternal health care due to better financial status. The study by **Paudel DP et al**[72]in Belgaum has concluded that mothers whose

husbands were businessmen had 2.84 times more odds of availing antenatal care than mothers whose husbands were farmers (OR=2.84, CI : 1.155-6.984).

A study by **Sahoo et al**[74] in a village near Delhi has shown mothers whose husbands had business as occupation sought more intranatal care than other mothers whose husbands were unemployed or in other occupations.

The study by **Shrivtasava et al**[75] in Rohilkhand region in 2011 has proved that husband's occupation is a strong determinant of maternal health service utilization. Mothers whose husbands' occupation was business/ services almost two times more likely to utilise postnatal health services (aOR 1.874, CI 1.234-4.867) than others.

4.8.1.8. Socioeconomic status:

The socioeconomic status of the mother is strongly related to the maternal health seeking behaviour as evident from literature. The study by **Salam et al** [43] in all Indian states in 2000 has shown that mothers belonging to low and middle income groups were twice (OR 1.68, CI 2.80 – 9.48)and five times (OR 4.80, CI 2.86 – 11.82) less likely to use antenatal services than mothers belonging to high income group.

The study also found that mothers of low income group were nine times less likely to have skilled birth attendance during their delivery compared to women of high income group aOR 9.00 (CI 4.66 – 17.12).

A study in Madhya Pradesh in 2008 by **Jat et al** [76]showed that mothers from the richest class in the study were nine times more likely to avail postnatal care within two weeks of delivery aOR= 8.28 (95%7.33-9.36).

4.8.1.9. Number of family Members:

The number of family members in a household also contributes to the maternal health seeking behaviour among women with regard to time and resource constraints in case of large households. The study by **Shrivatsava et al**[75]in Rohilkhand in Uttar Pradesh has reported that mothers with family members < 3, were 1.3 times more likely to seek antenatal services compared to mothers from families more than 3 members.

A study by **Bhattarcharjee et al**[49] in Jharkhand has shown that women from large joint families had 1.5 times higher odds of seeking institutional delivery than mothers from smaller families (aOR 1.50 95% 0.94–2.41)

However a study by **Paudel DP et al**[72] in Karnataka in 2011 has found that mothers hailing from larger families had two times more odds of utilising postnatal services (OR=2.017, CI: 1.089–3.739).

4.8.1.10. Birth Order:

The order of birth is significant since it has an impact on the attitude of the mother towards the pregnancy. Mothers with high birth order find it difficult to seek healthcare because of lack of time and assistance in household responsibilities. Studies in literature have shown that as the order of birth increases the health seeking behaviour among the mothers decreases (Bhatia and Cleland, 1995). A study by **Navaneetham K et al**[77] in South India has shown that mothers with birth order more than four had 60% lesser chances of availing antenatal care compared to mothers with birth order one.

In a study by **Kesterton AJ et al**[78] by analysing NFHS 1 and 2 has shown that mothers with first birth order had higher odds of institutional delivery (aOR= 2.41 (95% CI 2.20-2.64) than mothers with higher birth order.

A study by **Rawat et al**[79] has shown that mothers who had birth order one were more likely to use antenatal services and go for institutional delivery when compared to mothers of birth order two or more.

4.8.1.11. Mass Media exposure on MCH services:

Exposure to messages in mass media about the MCH services available is a major influential factor in the maternal health seeking behaviour of women owing to improved and universal access to mass media as evident from many studies. A study by **Singh A et al**[80] in 2008 in all Indian districts has shown that mothers who had exposure to mass media messages on MCH services have two times more odds of receiving full antenatal care than other mothers who have no exposure.(OR = 2.052, CI 1.414 -2.977)

A study by **Sugathan**[81] **et al** by analysing NFHS 1 and 2 and **Ravi RP et al** in Tamilnadu have shown that mothers who were exposed to mass media had higher odds of institutional delivery than mothers who were not exposed.

A study by **Pathak et al**[82] which compared data from three Indian states Uttar Pradesh, Maharashtra and TamilNadu found that mothers in Tamilnadu and Maharashtra who were exposed to mass media were more likely to seek postnatal care than mothers who were not exposed to mass media.

4.8.1.12. Decisionmaking for seeking health:

Decision making power in seeking health is important in seeking maternal health especially in our patriarchal type of Indian culture. A study by **Pandey et al**[83] based on NFHS 3 has found that women with decision making power were four times more likely to avail antenatal services and 1.5 times more likely to avail intranatal services (OR=1.56) than mothers who do not have. (OR= 3.86).A study by

Mahapatro S[70]4et al has shown significant association between women s decision making power and institutional delivery.

A study by **Ghose B et al [84]**in Bangladesh in 2014 has found a significant association of women's decision making power with safe delivery and adequate postnatal care.

4.8.2. ENABLING FACTORS:

4.8.2.1. Pregnancy registration:

The early registration of pregnancy (before12 weeks) plays a pivotal role in identifying comorbidities associated with pregnancy at an early stage and for timely interventions which will promote the health of both the mother and the fetus[84].A study by **Yatnatti et al[85]** in Bagalkot in Karnataka has found significant association between full antenatal care and early registration of pregnancy. A study by **Adhikari T et a**l[86] in four Indian states (Rajasthan , Chhattisgarh, Odisha and Madhya Pradesh) in 2007-08 showed that mothers who registered within 12 weeks were more likely to use antenatal services in all 4 states (aOR 1.7,2.1,9.5, and 1.6 respectively). A study by **Roy et al[87]** in Lucknow in 2010 has shown that mothers who registered early had three times higher odds of seeking antenatal care than mothers who registered their pregnancy after 12 weeks (aOR = 2.817, CI = 1.487 – 5.338).

4.8.2.2. Accessibility to health facility:

As evident from literature, distance from the health facility has an inverse relationship with maternal health seeking behaviour. The study by **Paudel et al[72]** in Belgaum in Karnatakahasshown that mothers who had a nearest health facility within 6 kms had four times more likely to use antenatal services (aOR = 3.91 , CI: 1.738-8.82)

A study by **Kesterton J[78] et al** has found that mothers who had their nearest health facility within 5 km had 2.43 times higher odds of institutional delivery than mothers who had health facility more than 5 kms (aOR= , 95% CI 2.43 (1.93-3.06))

4.8.2.3. Mode of transport:

Good transportfacilities ina region aid women in easily accessing health facilities for seeking health care .The study by **Paudel DP et al**[72]in rural Belgaum in Karnataka has found that the three fifths (60.6%) of the mothers used public transport for their visit to health facilities and 12% of mothers used their own vehicle. A study by **Singh N et al[88]** in Telengana has found that about 80-90% of the mothers utilised personal/ private transport for health visits whereas only 10-20% of them used public transport. A study by **Shariff A et al [89]** by analysing the rural household survey data in 1994 has found that access to public transport services is a significant factor which influences the antenatal and postnatal service utilisation.

4.8.2.4. Transport Cost per Health facility visit:

Studies in literature show that inexpensive transport cost facilitates maternal health service utilisation. The Belgaum study by **Paudel et al[72]has** found that mothers who spent < Rs 40 as transport cost were more likely to seek antenatal care than mothers who spent > Rs 40.

4.8.2.5. ICDS utilisation:

Utilisation of the ICDS centre by the women during pregnancy and postnatal period promotes the health of the mother and child by offering services like supplementary nutrition, antenatal care, immunisation and health education on nutrition and exclusive breast feeding . A study by **Agarwal M[90]** in Lucknow has found that mothers who utilised ICDS services were more likely to utilise maternal

health services than mothers who did not utilise ICDS.The study by **Sheriff A[89] et** al has concluded that antenatal service utilisation increases by 5% in a village which has an ICDS centre when compared to a village without an ICDS centre.

4.8.2.6. Benefit from Govt's conditional cash transfer schemes:

Conditional cash transfer schemes of the Government of India like Janani Suraksha Yojana, Muthulaksmi Reddy Maternity Benefit Scheme in Tamilnadu, Chiranjeevi Scheme in Gujarat are schemes aimed at promoting safe institutional deliveries and compensating wage loss for improving nutrition and health of the mother and child. A study by**Jain et al[91]** based on the Human developmental survey data before (2004) and after (2012) the initiation of JSY programme in India reports that the proportion of institutional deliveries in India has increased to 60% from 32%, the proportion of deliveries with skilled birth attendant has gone to 65% from 43 % and the proportion of mothers who utilise postnatal services has also doubled.

4.8.2.7. Type of delivery

The mode of delivery (Normal/ Caesarean) does play a role in the postnatal service utilisation of the mothers as evident from studies in literature. A study by **Mohan et al[98]** in Tanzania has proved that mothers who delivered by caesarean section had three times more odds of utilising postnatal health services as compared to women who had normal deliveries.(a OR = 2.95, CI 1.80 - 4.81). Another **study LimenihMA at al**[92]in Ethiopia in 2014 has shown that mothers who delivered by caesarean section had 4.82 times more likely to utilise postnatal services than mothers who delivered normally (aOR = 4.82, CI 1.86 - 12.54).

4.8.2.8. Place of delivery

The place of delivery (Public/ Private Health facility) also has an impact on the postnatal service utilisation among mothers. In a study by the Planning Commission [98] in a Quality evaluation study of maternal health care in the National Rural health Mission, it has been reported that mothers who delivered in private facilities were more likely go for postnatal check within 6 weeks (85%) when compared to mothers who delivered in public health facilities (76%).

4.8.3. NEED FACTORS:

4.8.3.1. Desire for the Pregnancy

The desire for pregnancy is concerned with the degree of maternal motivation to seek appropriate care during pregnancy. A study **by Singh A et al** [94]in Bihar, Jharkhand, Maharashtra and Tamil Nadu has shown that mothers who had planned their pregnancy had 2.32 times more odds of utilising antenatal services (aOR =2.32, CI 1.54- 3.48).

A study by **Chauhan BG et al**[95] by analysing NFHS 3 2005-06 data has shown that mothers who did not desire for their last child were 20% less likely to have deliveries assisted with skilled birth attendants than mothers who desired for their last child.(aOR=0.80,CI=0.75-0.91)

4.8.3.2. High Risk Pregnancy

High risk pregnancies like Pregnancy induced Hypertension, Diabetes complicating pregnancy, heart disease complicating pregnancy, anaemia complicating pregnancy, Previous LSCS are conditions which demand extra maternal care to promote maternal and foetal wellbeing**.** As study by **Gogoi et al**[96] in Assam has shown that mothers with High risk pregnancies had 1.19 times more odds of utilising

antenatal services compared to women without complicated pregnancies(aOR1.19, p<0.05).

A study by **Chakraborty et al**[97] in Bangladesh has proved that mothers with high risk pregnancies were two times more likely to utilise postnatal health services than their counterparts. (aOR = 2.195, CI 1.514–3.183)

4.8.3.3. Previous poor pregnancy outcomes (Abortion/ Still Birth)

As evident from literature women with previous poor pregnancy outcomes likeabortionorstillbirthutilised maternal health services morethan others.A study by **Paudel DP**[72] **et al** in has shown that mothers with previous still birth and abortion had 3.19 and 1.05 times more odds of utilising antenatal services than mothers without previous still birth or abortions

A study by **Navaneetham et**[77] al, a study which analyses maternal health service utilisation in Southern India has shown that mothers in Tamilnadu who had previous history of still births had 1.19 times higher odds of institutional delivery when compared to mothers who did not have a previous history of still birth.

4.8.3.4. Intranatal Complications

Complications during intranatal period like premature labour, excessive bleeding, obstructed labour, and eclampsia are conditions which demand excess maternal care during the intranatal and postnatal period**.**In a study by **Gogoi et al**[96] in Assam it has been found that mothers who faced intranatal (delivery) complications like Excessive bleeding, Prolonged/ Obstructed Labour were two times more likely to use maternal health services (aOR=1.84**)**.

4.8.3.5. Postnatal Complications:

Complications in the postnatal period like Excessive bleeding, puerperal sepsis with fever and abdominal pain, foul smelling lochia, Infection of the perineum, mastitis, Maternal Anaemia, Depression are conditions where mother needs to be given recommended treatment and follow up in the postnatal period. A study **Mohan D[98] et** al In Tanzania has shown that mothers who had postnatal complications had 1.5 times more likely to use postnatal services than mothers who did not have postnatal complications (aOR = 1.56, 95% CI 1.09- 2.22)

5. METHODOLOGY

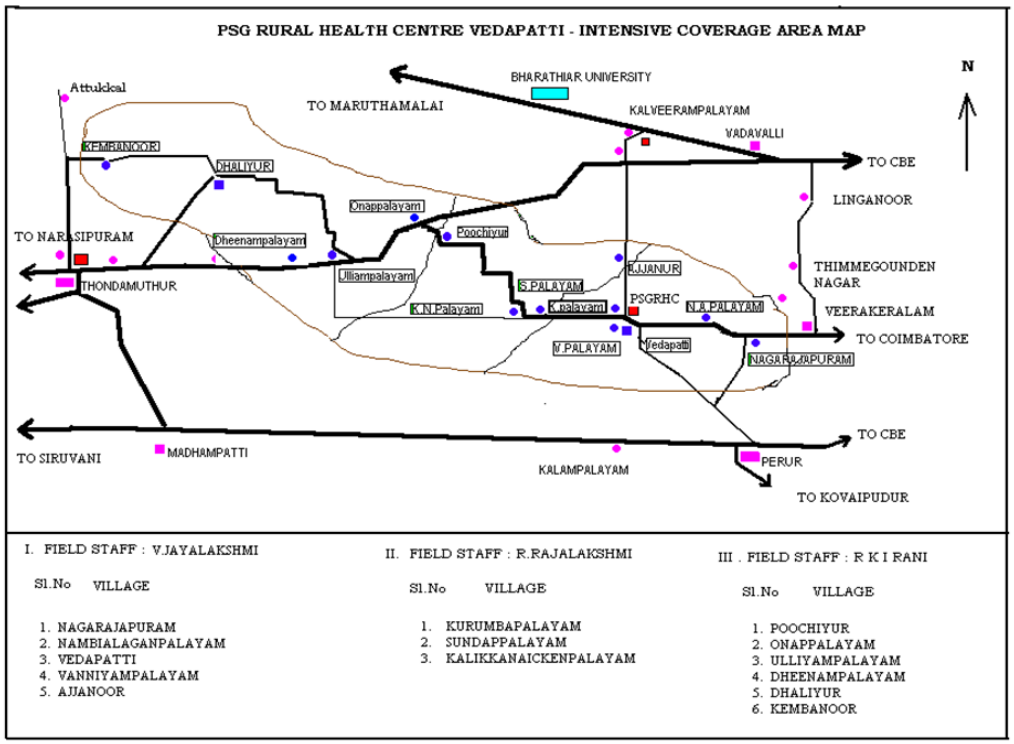
5.1 Study Population

The study was conducted in the field practice area of the Rural Health Training Centre (RHTC) Vedapatti under Department of Community Medicine, PSG Institute of Medical Sciences& Research, Coimbatore. RHTC caters to a population of 23841

distributed in 14 villages with 6697 households and 6523 women of reproductive age group.

The crude birth rate of the area is 10.5/ 1000 mid-year population with a sex ratio of 1043 females per 1000 males and literacy rate of 82%. According to the 2011 Vital Statistics report of the Indian Census, the total fertility rate in Coimbatore is 1.41.[100, 101] The RHTC offers various primary health care services and MCH services to the catchment area since 25 years. A computerized population -based database of the area is maintained at the RHTC by the household survey updated every three years. Family details of all the households in the area are maintained in the RHTC.

Figure7: Map of RHTC- Catchment area



The list of women who had delivered in the previous one year in each of the villages was obtained from the data collected by household survey conducted by the RHTC field workers during the year 2016. The number of women of reproductive age group who have given birth in the previous one year residing in all the 14 villages of Vedapatti are shown in the following table**.**

Table 5.1: Distribution of women in reproductive age group who gave birth in the previous one year in all the 14 villages of Vedapatti

S.No	Name of the village	Total Households	Total Population	Recently delivered
1	Vedappatti	1138	4082	44
2	Kalinganayakkanpalayam	858	3088	41
3	Kuruvampalayam	875	3133	34
4	Nagarajapuram	394	1536	29
5	Onampalayam	450	1473	24

6	Nambialaganpalayam	310	1139	17
7	Ajjanoor	235	849	11
8	Poochiyoor	212	766	12
9	Dhaliyur	324	1071	16
10	Dheenampalayam	245	831	14
11	Sundapalayam	847	3068	28
12	Uliampalayam	292	1006	18
13	Kembanoor	360	1238	12
14	Vanniyampalayam	157	561	9
	TOTAL	**6697**	**23841**	**309**

5.2. Sample Size Determination:

With an estimated prevalence of 43% mothers who had full antenatal care based on National family Health survey 4[99] (Tamilnadu) and 15 % allowable error, sample size was calculated using the formula

$$n = \frac{(1.96)^2 pq}{d^2}$$

$$n = \frac{3.84\ X43\ X\ 57}{6.45 * 6.45}$$

n=226

Where, n = number of sample required

p = prevalence (43)

q = 100 – p (57)

d = allowable error (15% of prevalence, hence 6.45)

Expecting a non-response rate of 20%, the total sample size was calculated

N = 226X 100/80

= 266

Sample size required = 266 recently delivered women

5.3. Sampling Frame

Among the 6523 women of reproductive age group in all 14 villages, all the permanent resident mothers who had given birth in the previous one year were included in the study. To get the required sample size of 266, all the permanent resident mothers who had given birth in the previous one year were included. Approval for the study was obtained from the Institutional Human ethics committee, PSG IMSR. Using the list of recently delivered women in the Household survey data, the mothers were visited in their houses and were interviewed using a semi structured questionnaire

5.3.1 Inclusion Criteria

- Women who have given birth in the previous one year and who are residents of the village for at least one year or more.
- Women who have had IUD/ Still birth / Infant death

5.3.2. Exclusion criteria

- Pregnant women / Unmarried / Widows
- Women who had not completed their puerperium
- Women who were not available in their houses even after two visits

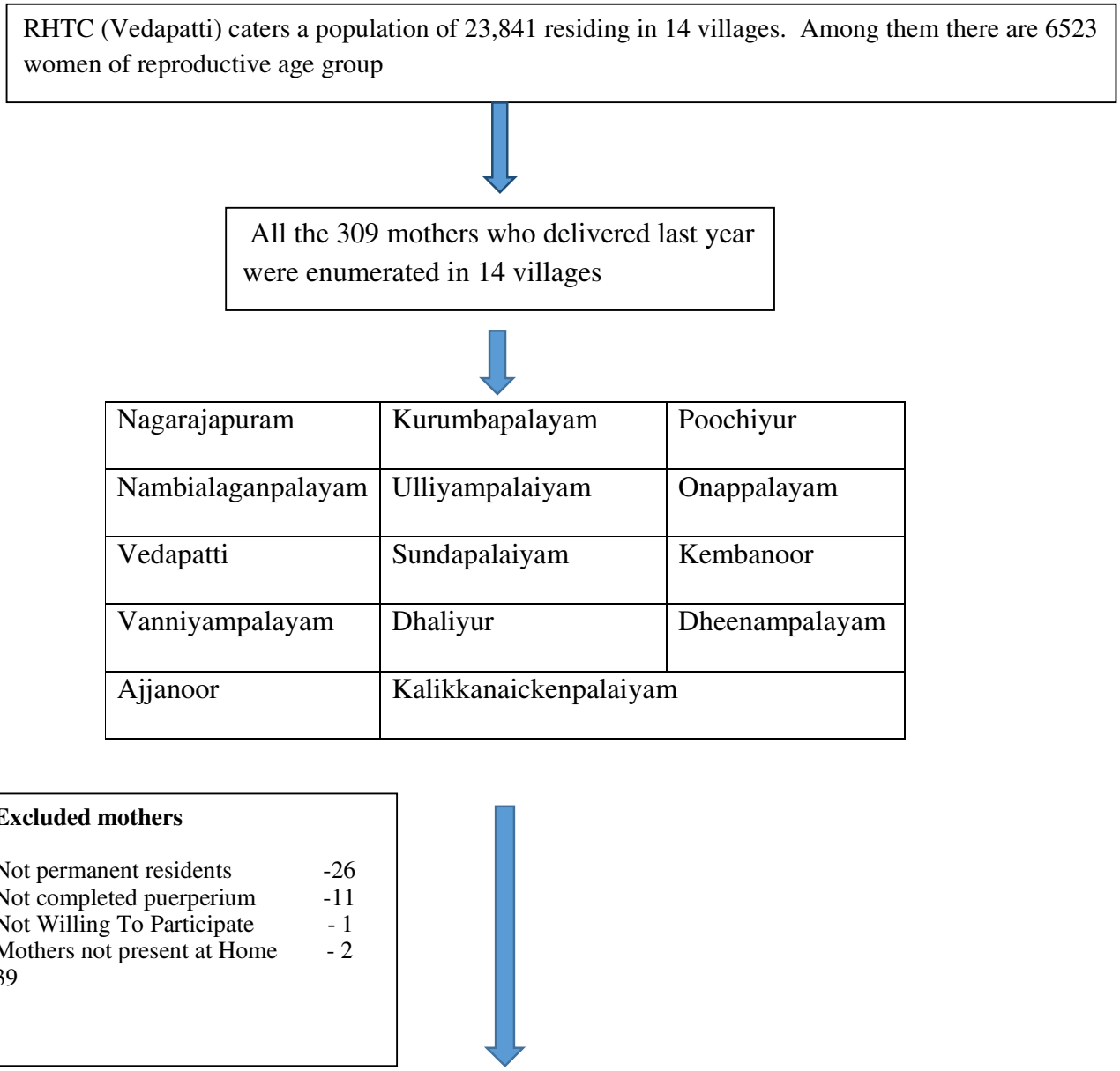
5.4 Study design - Cross sectional study

5.5 Study Period -Community based study was carried out for six months (November 2016 – April 2017)

5.6. Study Area

All 14 villages located in the field practice area of PSG Rural Health Training Centre, Vedapatti attached to PSGIMSR, Coimbatore.

Figure8: Flow diagram describing sample size



5.7 Data collection

5.7.1 Questionnaire: The questionnaire was based on the Women's questionnaire of the National Family Health survey 4[99]. The questionnaire had closed ended questions to elicit the following details from the mothers.

5.7.1.1 Demographic Factors: Name, Age during child birth, Education, Occupation, Religion, Caste

5.7.1.2 Socio-Economic Factors: Type of Family, Total number of family members, Total monthly family income.

5.7.1.3 Maternal Factors: Birth Order, Abortion, Still birth, Intended or Unintended Pregnancy.

5.7.1.4. Antenatal Care: Mother and Child Protection Card, Time of Registration, Time of first antenatal visit, number of antenatal visits, Reasons for less than 4 visits, Place of antenatal visits, Distance of nearest health facility, decision making for place of antenatal visits and place of delivery, Deworming , Number of days of consuming IFA tablets /syrup, Tetanus toxoid injection, weight, BP, abdomen and breast examination during every visit, Height, blood , urine tests, USG abdomen, Nutrition advice, birth preparedness, Breast feeding importance counselling, Danger signs of pregnancy, utilisation of nearby ICDS centre, Complications like PIH, Anaemia, Diabetes, thyroid complicated pregnancy, Out of pocket expenses for every AN visit, Government Benefit schemes like Janani Suraksha Yojana & Muthulakshmi Reddy Scheme.

5.7.1.5 Intranatal Care: Institutional delivery, birth weight, (LBW/ Normal), experience of delivery complications prolonged labor, breech, eclampsia, Type of delivery, person who conducted delivery, Initiation of breast feeding after delivery, Transport for delivery, Utilization of 108 ambulance service, Delivery expense.

5.7.1.6. Postnatal care: PN visit within 2 weeks, Complications during puerperium, Information about newborn danger signs, PN exclusive breastfeeding counselling, PN Family Planning advice, PN Newborn care advice, Examination of the new born, Prelacteal feeds, BCG/OPV/ Hep B Immunisation.

5.8 Steps in data collection:

The study was started after getting approval from the Institutional Human Ethics Committee (IHEC).

5.8.1 Pilot study:

Pilot study was carried out in a village adjacent to the field practice area of the Rural Health Training Center to identify difficulties in eliciting the data and to make necessary modifications in the questionnaire. A nearby village called Pudhur was selected purposively for pilot study. There were around 38 eligible mothers who delivered in the previous year and were available at the time of visit and were willing to participate. The purpose of the study was explained and after getting informed consent, the women were interviewed. The feasibility of conducting the study was analyzed and necessary modifications in the questionnaire were done.

5.8.2 Data collection for study:

The list of mothers who had given birth in the previous one year (November 2015- November 2016) in all 14 villages and their respective residential address was obtained from the household survey data. All the individual households were visited, the aim of the study explained, their written consent for participation in the study was sought and included in the study. The Questionnaire was filled by the principal

investigator after eliciting the response to the questions from the mothers by interview method.

5.9. OPERATIONAL DEFINITIONS

5.9.1. Dependent variables for the study:

5.9.1.1.. Full Antenatal care: A woman is said to have had full Antenatal care when the following three criteria are fulfilled[101]:

- Has gone for minimum of four antenatal visits
- Has consumed IFA tablets or syrup for a minimum period of 100 days or more during pregnancy
- Has had at least one Tetanus toxoid injection

5.9.1.2. Safe delivery

- Had an Institutional delivery[70]
- Had Skilled attendance at birth[70]

5.9.1.3. Adequate Postnatal Care

- Had postnatal care within two weeks from a doctor/nurse either at a health facility or by home visit[102]

5.9.2. Independent Variables of the study:

The variables considered as factors influencing antenatal health care seekingbehavior in this study includes

5.9.2.1. Age of mother during childbirth: Mothers' age at last childbirth (≤ 30 years vs. > 30 years),

5.9.2.2. Mother's Education: Maximum years of schooling/ graduation completed (Upto High school vs. Above High School),

5.9.2.3. Working Status: Mothers who worked for more than one month in the past one year preceding the interview (Working vs. Not Working),

5.9.2.4. Religion: Women's self-reporting religious groups as: Hindu, Muslim and others grouped as (Hindu vs others)

5.9.2.5. Community: The community category in which the mother falls (OC/BC/MBC/SC/ST) grouped as (OC/BC/MBC vs SC/ST)

5.9.2.6. Husband's education: Maximum years of schooling/ graduation completed (Upto High school vs. Above High School),

5.9.2.7. Husband's occupation: Major occupation of the husband (Highly skilled/Semikilled Vs. Semiskilled / unskilled) as per Government of Tamilnadu; Labor and Employment Department: Occupational Categories

5.9.2.8.Socioeconomic status: Socio economic status (SES) was assessed using the Modified B.G. Prasad's scale based on Consumer Price Index (CPI) for the month of November 2016 (CPI- 248)[103].Those having the per capita income per month of Rs.5490 and above were classified as Class I, Rs.2750 – Rs.5489 as Class II, Rs.1650-2749 as Class III, Rs.820-1649 as Class IV and per capita income less than Rs. 820 as Class V and grouped for analysis as (Class I,II,III vs. IV and V),

5.9.2.9. Number of family members: Number of members in the household including the mother (Less than four vs More than four)

5.9.2.10. Birth Order: The number of total deliveries whichincludes her last delivery. (Birth order one vs More than one)

5.9.2.11. Mass media exposure on MCH services: Whether the mother has heard/ seen/read in Radio/TV/ Newspaper or magazines about the available MCH services in health facilities[70] (Yes/ No)

5.9.2.12. Decision making in seeking health care: Whether the woman has freedom to decide on issues on health seeking like place of Antenatal checkup and place of delivery[70] (Self / Others)

5.9.2.13. Early registration: Registration of pregnancy with a Doctor/ Nurse/ VHN/ ANM within 12 weeks of conception (registration <= 3 months vs.> 3 months),

5.9.2.14. Accessibility to health facility: The distance travelled by the mother to access maternal health care in a facility[70] (in kms) (Less than 3 kms Vs. More than 3 kms)

5.9.2.15. Mode of transport: The available mode of transport used to reach the facility like / Private transport /Public transport, grouped as (Private / Public transport)[72]

5.9.2.16. Transport cost per health facility visit: The cost incurred for transport to health facilities for availing maternal health services in rupees (≤Rs 100 Vs. > Rs 100)

5.9.2.17. ICDSUtilization: Whether the mother availed ICDS services like antenatal care, supplementary nutrition, Immunization from ICDS center in the village (Yes/ No)

5.9.2.18.Government's Conditional cash transfer assistance: Whether the mother received assistance from Governments Conditional Cash transfer schemes like Janani Suraksha Yojana and / or Dr Muthulakshmi Reddy Maternity Benefit Scheme (Yes / No)

5.9.2.19. Desire for Pregnancy: Whether the mother desired for a child or not desired / did not desire[76] (DesiredVs. Undesired Pregnancy)

5.9.2.20. Previous Poor Pregnancy Outcomes: Whether the mother had history of Still birth / Abortion in previous pregnancies (Yes / No)

5.9.2.21. Place of delivery: Place of the last childbirth (Home/ Public Health facility/ Private health facility)

5.9.2.22. Type of delivery: Whether the childbirth was by Normal vaginal delivery or by caesarean section (Normal / Caesarean)

5.9.2.23. High Risk pregnancy: Whether the mother had conditions likePregnancy Induces Hypertension, Anaemia complicated pregnancy, Diabetes complicating pregnancy, cardiovascular disease complicating pregnancy,Thyroid complicating pregnancy, multiple pregnancy, Previous LSCS, during her last pregnancy (Yes/No)

5.9.2.24. Intranatal Complications: Whether the mother experienced delivery complications like premature rupture of membranes (before 34 weeks), obstructed labour, Malpresentations, Excessive bleeding in her last childbirth (Yes/No)

5.9.2.25. Postnatal Complications: Whether the mother experienced delivery complications like Excessive Bleeding, Puerperal sepsis with fever, abdominal pain, Excessive Bleeding, Mastitis, Infection of the Perineum in her last childbirth (Yes/No)

At the end of the study, the mothers were given health education regarding the importance of breast feeding, nutritious diet, routine and optional vaccines, Recognition of danger signals in case of ARI in child, birth spacing, contraceptive usage and those who needed further treatment were referred to the RHTC for further management.

5.10. ANALYSIS

Data entry was made in the Microsoft Excel software in codes and analysis was done with SPSS-23 computer package. Prevalence was expressed in percentage with 95% Confidence interval (CI). The associations between independent variables

and maternal health care seeking behaviour in terms the dependent variables Full Antenatal care, Safe delivery and Postnatal Care (Sought / Not sought) were tested for significance using chi square test and odds ratio was estimated. The variables which were found to be statistically significant by univariate analysis was further subjected to multivariate logistic regression analysis. P value <0.05 was considered as statistically significant.

6. RESULTS

The current study was carried out to assess the health seeking behaviour among women during their antenatal, intranatal and postnatal period and to find the association of the predisposing, enabling and need factors with the health seeking behaviour of women from all the fourteen villages in the field practice area of Rural Health Training Centre (RHTC), Vedapatti attached to the Department of Community Medicine, PSG Institute of Medical Sciences and Research, Coimbatore

Table 6.1: Village - wise distribution of study subjects:

S.No	Name of the Village	Total Number of eligible mothers	Study Participants (%)
1.	Vedappatti	44	40(5.9)
2.	Kalikanayakkanpalayam	41	38(14.1)
3.	Kurumbapalayam	34	29(10.7)
4.	Nagarajapuram	29	27(10)
5.	Onampalayam	24	20(7.4)
6.	Nambialaganpalayam	17	17(6.3)
7.	Ajjanoor	16	16(5.9)

8.	Poochiyoor	15	15(5.6)
9.	Dhaliyur	16	14(5.2)
10.	Dheenampalayam	14	14(5.2)
11.	Sundapalayam	20	14(5.2)
12.	Uliampalayam	18	14(5.2)
13.	Kembanoor	12	7(2.6)
14.	Vanniyampalayam	9	5(1.9)
	TOTAL	**309**	**270**

Table 6.1 shows the village wise distribution of study participants. Out of the 309 eligible mothers in the study area, 39 of them did not participate in the study. The overall participation rate is 87.37%. Out of the 39 mothers, 26 of them were not permanent residents of the villages, 11 mothers did not complete puerperium (42 days), 2 mothers could not be contacted even after two visits by the investigator and one of them was not willing to participate in the study.

Table 6.2: Frequency distribution of study participants by Socio demographic characteristics (n=270)

S No	Background characteristic	Category	Number	Percentage
1	Mother's age at childbirth	<=30years	213	78.9%
		31-39 years	56	20.7%
		>=40 years	1	0.4%
2	Mother's	Illiterate	1	0.4%

	education	Primary School	9	3.3%
		Middle School	44	16.3%
		High School	84	31.1%
		H. Sec School	64	23.7%
		Graduate and above	68	25.2%
3	Mothers	Not working	249	92.2%
		Working	21	7.8%
4	Religion	Hindus	255	94.4%
		Christians	11	4.1%
		Muslims	4	1.5%
5	Community	OC	3	1.1%
		BC	98	36.3%
		MBC	114	42.2%
		SC	40	14.8%
		ST	15	15.6%
6	Husband's education*	Illiterate	1	0.4%
		Primary School	5	1.9%
		Middle School	38	14.1%
		High School	56	20.7%
		H. Sec School	81	30%
		Graduate and above	89	33%
7	Husband's Occupational category**	Unskilled	80	29.6%
		Semiskilled	121	44.8%
		Skilled	64	23.7%
		Highly Skilled	5	1.9%
8	Socioeconomic Classification (Modified BG	Class I	37	13.7%
		Class II	125	46.3%
		Class III	92	34.1%
		Class IV	15	5.6%
		Class V	1	0.4%

*Selected Information on School Education in India 2011, Government of India

The frequency distribution of the study participants by sociodemographic characteristics is shown in table 6.2.Among the 270 women studied a major proportion (78.(%) were in the age group less than 30 years .Majority of them

(31.1%) were educated up to High school . Most of the mothers belonged to Hindu religion (94.4%) and Most backward Community (42.2%).Majority of their husbands were Graduates and above (33%) and were Semiskilled workers (44.8%) by occupational category. About 46.3% of mothers belonged to Class II and 34.1% belonged to Class III of Modified Prasad's socioeconomic classification.

Table: 6.3: Descriptive details of various antenatal, intranatal and postnatal care received by the study participants (n=270)

CATEGORY	FREQUENCY	PERCENTAGE
Mothers who had MCP card	261	96.7%
Had first AN check-up in First trimester	243	90%
Given tablet for deworming	171	63.3%
At least doneonce		
Height measurement	270	100%
Ultrasound examination	269	99.6%
Breast examination	53	19.6%
Urine examination	270	100%
Blood investigations	270	100%
Every visit done		
Weight measurement	270	100%
Blood pressure measurement	265	98.1%
Abdominal examination	270	100%
Told about Birth preparedness	180	66.7%
Told about pregnancy Danger signs	136	50.3%
Received Nutrition advice in antenatal period	266	98.5%
Received Breastfeeding advice in antenatal period	32	11.9%
Received Family planning advice in antenatal period	94	34.8%
Initiated breast feeding within one hour of birth	119	44.1%
Not given pre lacteals (Honey) to new born	125	46.3%
Gave colostrum to new born	269	99.6%
Received Nutrition advice in postnatal period	270	100%
Received Breastfeeding advice in postnatal period	256	94.8%
Received Family planning advice in postnatal period	122	45.1%

Told about Newborn Danger signals	86	31.8%
Used 108 ambulance service for delivery transport	18	6.75%

Table 6.3 shows the details of antenatal, intranatal and postnatal care received by the mothers under study. From the table it is evidentthat majority of the mothers have received most of the maternal health services. However, only 63.3% mothers were dewormed, breast examination was carried out at least once in only 19.6% of mothers, 66.7% of them had been told about birth preparedness, only 44.1% of mothers have initiated breast feeding within one hour, only 31.8% of them were told about newborn danger signals and only 6.7% of women have used the 108 services. Also, only 34.8 % of mothers received counselling on family planning methods during their antenatal period and 45.1% of mothers have received counselling on family planning methods during their postnatal period.

Table 6.4: Maternal health seeking behavior in terms of full antenatal care, safe delivery and adequate postnatal care (n=270)

MATERNAL HEALTH CARE SERVICE	**UTILISATION RATE**	
	NUMBER	**PERCENTAGE CI**
Minimum four antenatal care visits	258	95.6 (93.1-98.0)
Consumption of minimum 100 iron folic acid tablets or more	234	86.7 (82.6-90.7)
Received at least one tetanus toxoid injection	269	99.6 (99.4-99.7)

Full antenatal care	**229**	**84.8 (80.8-89.07)**
Safe delivery	**270**	**100**
Institutional delivery	270	100
Skilled attendance at birth	270	100
Adequate Postnatal Care	**165**	**61.1(56.9-65.2)**
Postnatal visit within two weeks	165	61.1(56.9-65.2)

Table 6.4 shows the maternal health seeking behavior of the study participants during their antenatal, intranatal and postnatal period. Among the 270 mothers, 95.6 % of them had minimum four antenatal visits during their pregnancy, 86.7 % of them had consumed a minimum of 100 Iron and folic acid tablets or more and 99.6 % of them had received at least one tetanus toxoid injection. The proportion of mothers who had **Full antenatal care** (Minimum four antenatal care visits +Consumption of minimum 100 iron folic acid tablets or more + Received at least one tetanus toxoid injection) **was 84.8 %(CI 80.8 % -89.07 %)**

All the 270 mothers had institutional delivery assisted by a skilled birth attendant. Hence the proportion of mothers who had **Safe delivery was 100%.**

The proportion of mothers who had a postnatal visit within two weeks of delivery was 61.1% (CI 56.9% -65.2 %). Hence **61.1%** of mothers had **Adequate postnatal care.**

Table 6.5: Factors influencing health seeking behavior of study participants during their antenatal, intranatal and postnatal period

Table 6. 5.1.: Predisposing factors (n=270)

S	Variable	Category	Frequency	Percentage
1	Mother's age at childbirth	<=30years	213	78.9%
		31-39 years	56	20.7%
		>=40 years	1	0.4%
2.	Mothers education	Illiterate	1	0.4%
		Primary	9	3.3%
		Middle	44	16.3%
		High School	84	31.1%
		H Sec	64	23.7%
		Graduate	68	25.2%
3.	Mothers working status	Not working	249	92.2%
		Working	21	7.8%
4.	Religion	Hindu	255	92.2%
		Christian	11	4.1%
		Muslim	4	1.5%
5.	Community	OC	3	1.1%
		BC	98	36.3%
		MBC	114	42.2%
		SC	40	14.8%
		ST	15	15.6
6.	Husband education	Illiterate	1	0.4%
		Primary	5	1.9%
		Middle school	38	14.1%
		High School	56	20.7%
		H Sec School	81	30%
		Graduate and above	89	33%
7	Husband's occupational category**	Unskilled	80	29.6%
		Semiskilled	121	44.8%
		Skilled	64	23.7%
		Highly Skilled	5	1.9%
8	Socioeconomic class	Class I	37	13.7%

		Class II	125	46.3%
		Class III	92	34.1%
		Class IV	15	5.6%
		Class V	1	0.4%
9	Number of family members	Upto 4	231	85.6%
		More than 4	39	14.4%
10	Birth order	One	159	58.9%
		Two or more	111	41.1%
11	Mass Media exposure on MCH services	Exposed	264	97.8%
		Not Exposed	6	2.2%
12	Decision making for seeking health	Self	38	14.1%
		Others	232	85.9%

Table 6.5.1 shows the Predisposing factors which influence the health seeking behaviour of the mothers during their antennal, intranatal and postnatal period. Majority of mothers (78.9%) were less than 30 years of age, belonged to Hindu religion (92.2%), educated up to High School (31.1%), belonged to most backward Community (42.2%), and came under Class III of Modified Prasad's socioeconomic classification (46.3%). About 33% of the husbands were graduates and 44.8% were semiskilled workers by occupation. Majority of mothers (85.6%) had families with ≤ 4 members. The order of birth was one for 58.9% of mothers and two or more for 41.1% of mothers. Mothers who were exposed to mass media messages on the available MCH services was 97.8% and only 14.1% mothers had the decision making power for seeking health.

Table 6.5.2: Enabling factors:

S	Variable	Category	Frequency	Percentage

	Pregnancy Registration	<= 3 months	249	92.2%
		4 – 6 months	19	7%
		>= 7 months	2	0.7%
2.	Nearest Health facility	Within 3 kms	246	91.1.%
		More than 3	24	8.9%
3.	Mode of transport	Private	22	8.1%
		Public transport	248	91.9%
4.	Transport cost per visit to health facility	Less than or equal to Rs 100	188	69.6%
		More than Rs 100	82	30.4%
5	ICDS Utilisation	Yes	104	38.5%
		No	166	61.5%
6	Type of delivery	Normal	165	61.1%
		Caesarean	105	38.9%
7.	Place of delivery	GH	106	39.3
		PHC	56	20.7
		Private	108	40.0
8	Received Government conditional Cash transfer scheme	Yes	146	54.1%
		No	124	45.9%

Table 6.5.2 shows the enabling factors which influence the health seeking behaviour of the mothers during their antennal, intranatal and postnatal period. The proportion of registered pregnancies was 100% and 92% of mothers had registeredwithin three months. The nearest healthfacility was within 3 kms for 91.1% of mothers. Only 8.1% of them used their own vehicle for visiting the health facilitieswhereas 91 % of the mothers used Public / Hired transport for visiting health facilities. The cost of transport to reach health facilities was≥ Rs 100 in 69.6% of mothers and more than Rs 100 in 30.4% of them. Only 38.5% of the mothers had utilised the ICDS centre in the village antenatal services, immunisation and

supplementary nutrition. Around 39% of the deliveries were by Caesarean section, 39.3% of mothers delivered in Government Hospitals, 20.7% delivered in Primary Health centres and 40% of mothers had had delivered in private health facilities. Of the total, 54% of them had benefitted from Governments' Conditional cash transfer assistance schemes like JSY and MLR.

Table 6.5.3: Need factors :(n=270)

S No	Variable	Category	Frequency	Percentage
1	Desire for the pregnancy	Desired	240	88.9%
		Not desired	30	11.1%
2	High risk pregnancy	Yes	62	23%
		No	208	77%
3	Intranatal Complications	Yes	7	2.59%
		No	263	97.4%
4	Postnatal Complications	Yes	14	5.2%
		No	256	94.8%
3.	Previous poor pregnancy outcomes	Yes	36	13.33%
		No	234	86.67%

Table 6.5.3 shows the need factors which influence the health seeking behaviour of the mothers during their antennal, intranatal and postnatal period. Among the total, 88.9% of the mothers had a desired for a child when they had conceived whereas 11.1% had an undesired pregnancy. About 23% of mothers had High risk pregnancies, 2.5% of them had intranatal complications and 5.55% had complications in their postnatal period. The proportion of mothers who had history of abortion or still birth in their previous pregnancies was 14.8%.

6.6. DEPENDENT VARIABLE 1:Full Antenatal care

TABLE 6.6.1: Association of Full antenatal Care with the predisposing,enabling and need factors by Univariate analysis

Factors	Category	Total	Full Antenatal care		Unadjusted odds ratio (95% Confidence Interval)	p value
			Yes	No		
			Num (%)	Num (%)		
Predisposing factors						
Maternal Age at	<30 years	213	186(87.3)	27(12.7)	2.243(1.086-4.634)	**0.03***
	≥30 years	57	43(75.4)	14(24.6)	1	
Mothers Education	Above High school	132	113(85.6)	19(14.4)	1.128(0.579-2.196)	0.73
	Upto High School	138	116(84.1)	22(15.9)	1	
Working Status	Not	249	211(84.7)	38(15.3)	0.925(0.260-3.296)	1.00
	Working	21	18(85.7)	3(14.3)	1	
Religion	Hindu	255	217(85.1)	38(14.9)	1.428(0.385-5.298)	
	Non-Hindu	15	12(80)	3(20)	1	
Community	OC/BC/MB	215	189(87.9)	26(12.1)	2.726(1.325-	**0.010***
	SC/ST	55	40(72.7)	15(27.3)	1	
Husband's education	Above High school	170	144(84.7)	26(15.3)	0.977(0.490-1.948)	1.000
	Upto High School	100	85(85)	15(15)	1	
Husband 's Occupation	Highly skilled/	69	57(82.6)	12(17.4)	0.801(0.383-1.673)	0.563*
	Semiskilled/ Unskilled	201	172(85.6)	29(14.4)	1	
Socio-economic status (Modified	Class I,II,III	254	222(87.4)	32(12.6)	8.920(3.106-25.61)	**0.001***
	Class IV,V	16	7(43.8)	9(56.3)	1	
Number of	Upto 4	231	203(87.9)	28(12.1)	3.625(1.161-7.862)	**0.003***

family members	More than 4	39	26(66.7)	13(33.3)	1	
Birth Order	One	159	145(91.2)	14(8.8)	3.329(1.654-6.699)	**0.001***
	Two or more	111	84(75.7)	27(24.3)	1	
Mass media Exposure on MCH	Exposed	264	228(86.4)	36(13.6)	31.66(3.59-278.9)	**0.001***
	Not Exposed	6	1(16.7)	5(83.3)	1	
Decision making for seeking	Self	38	35(92.1)	3(7.9)	2.285(0.668-	0.227
	Others	232	194(83.6)	38(16.4)	1	
Enabling factors						
Pregnancy registration	Early	249	220(88.4)	29(11.6)	10.115(3.923-26.071)	**0.001***
	Delayed	21	9(42.9)	12(57.1)	1	
Nearest health facility	Within 3	246	209(85)	37(15)	1.130(0.365-3.494)	0.720
	More than 3 kms	24	20(83.3)	4(16.7)	1	
Mode of transport	Own	22	16(72.7)	6(27.3)	0.438(0.161-1.198)	0.118
	Hired/Public transport	248	213(85.9)	35(14.1)	1	
Transport cost per Health facility	< Rs100	188	156(83)	32(17)	0.601(0.273-1.324)	0.269
	>= Rs100	82	73(89)	9(11)	1	
ICDS utilisation	Yes	104	87(83.7)	17(16.3)	0.865(0.440-1.701)	0.720
	No	166	142(85.5)	24914.5)	1	
Received Govt conditional Cash transfer	Received	146	119(81.5)	27(18.5)	0.561(0.28-1.12)	0.12
	Not received	124	110(88.7)	14(11.3)		

Need factors						
Desire for the pregnancy	Desired	240	212(88.3)	28(11.7)	5.790(2.543-	**0.001***
	Not desired	30	17956.7)	13(43.3)	1	
High risk pregnancy	Yes	62	60(96.8)	2(3.2)	6.923(1.662-29.541)	**0.002***
	No	208	169(81.3)	34(14.8)	1	
Previous Poor pregnancy outcomes	Yes	36	33(86.1)	5(13.9)	1.127(0.411-3.090)	0.52
	No	234	229(84.8)	34(15.2)	1	

***Significant (p< 0.05)**

Table 6.6.1 shows the association of Full Antenatal Care with the influencing factors by Univariate analysis. The odds of Full Antenatal Care was significantly higher among mothers whose age was < 30 years, mothers who belonged to OC/BC/MBC Community, mothers belonging to higher socioeconomic status (Class I, II & III), mothers with families ≤ 4 members, mothers with birth order one, mothers who were exposed to Mass media messages on MCH services, mothers who registered their pregnancy early, Mothers who had desire for the pregnancy, and those with High risk pregnancies.

There was no significant association between Full Antenatal care and Mothers education, working status, religion, Husband's education, occupation, Mothers' decision making power for seeking health, accessibility to health facility, Mode and cost of transport, ICDS Utilisation, assistance from Government's conditional cash transfer schemes and previous poor pregnancy outcomes.

Table 6.6.2: Association of Full antenatal care with the selected factors by Multivariate Logistic Regression

Variable	Category	Adjusted Odds ratio	Confidence Interval	p value
Maternal Age at childbirth	<30 years	1.54	0.59-4.03	0.371
	>= 30 years	1		
Community	OC/BC/MBC	2.83	1.19-6.71	**0.010***
	SC/ST	1		
Socio-Economic status	Class I,II,III	4.30	0.96-19.22	0.056
	Class IV,V	1		
Number of family Members	Upto 4	1.52	0.52-4.40	0.437
	More than 4	1		
Birth Order	One	1.81	0.74-4.44	0.191
	Two or more	1		
Pregnancy registration	Early	5.15	1.49-17.77	**0.009***
	Delayed	1		
Planned Pregnancy	Yes	1.36	0.41-4.49	0.614
	No	1		
High Risk Pregnancy	Yes	7.81	1.57-38.75	**0.012***
	No	1		
Mass Media exposure regarding MCH services	Exposed	13.66	1.01-184.6	**0.049***
	Not exposed	1		

***Significant (p< 0.05)**

Table 6.6.2shows the Mulitivariate logistic regression exploring the association of Full Antenatal care with the influencing factors which had a statistically significant association by univariate analysis. The table shows that factors like Community, Pregnancy registration, High Risk pregnancy and mass media exposure on MCH services were statistically significant ($p< 0.05$) after logistic regression.

1. Mothers who belonged to OC/BC/MBC communities had 1.54 times higher odds of seeking Full Antenatal care when compared to mothers who belong to SC/ST Community.
2. Mothers who registered their pregnancy early (within 3 months) had 5.15 times more odds of seeking Full antenatal care when compared to mothers who had registered their pregnancy late (more than 3 months).
3. Mothers who had High risk pregnancies had 7.8 times more odds of seeking Full antenatal care when compared to mothers who had did not have High risk pregnancies.
4. Mothers who had exposure to Mass media messages on MCH services had had 13.66 times more odds of seeking Full antenatal care when compared to mothers who had did not have exposure to Mass media messages on MCH services.

Factors like maternal age at childbirth, socioeconomic status, Number of family members, Birth order, Desire for the pregnancy were not statistically significant association with Full Antenatal care after logistic regression.

6.7. DEPENDENT VARIABLE 2: Safe delivery

Among the 270 mothers, all of them had Safe delivery (100%). Hence the association between Safe delivery and predisposing, enabling and need factors were not analyzed.

6.8. DEPENDENT VARIABLE 3: Adequate Postnatal Care

TABLE 6.8.1: Association of Adequate postnatal care with the predisposing, enabling and need factors by Univariate analysis

Factors	Category	Total	Adequate postnatal		Unadjusted odds ratio (95% Confidence	p value
			Yes	No		
			Num (%)	Num (%)		
Predisposing factors						
Maternal Age at childbirth	<30 years	213	128(60.1)	85(39.9)	0.81(0.44-1.49)	0.54
	≥30 years	57	37(64.9)	20(35.1)	1	
Mothers Education	Above High	132	87(65.9)	45(34.1)	1.48(0.90-2.43)	0.134
	Upto High School	138	78(56.5)	60(43.5)	1	
Mother's Working Status	Not	249	153(61.4)	96(31.6)	1.19(0.48-2.94)	0.816
	Working	21	12(57.1)	9(42.9)	1	
Religion	Hindu	255	153(60)	102(40)	0.375(0.105-	0.174
	Non-Hindu	15	12(80)	3(20)	1	
Community	OC/BC/M	215	132(61.4)	83(38.6)	1.060(0.579-	0.87
	SC/ST	55	33(60)	22(40)	1	
Socio-economic status (Modified Prasad's)	Class I,II,III	254	158(62.2)	96(37.8)	2.116(0.763-	0.183
	Class IV,V	16	7(43.8)	9(56.3)	1	
Husband's education	Above	170	103(60)	87(39.4)	0.942(0.567-	0.897
	Upto High School	100	62(62)	38(38)	1	
Husband 's Occupation	Highly skilled/ Skilled	69	38(55.1)	31(44.9)	0.714(0.410- 1.243)	0.254

	Semiskilled/Unskilled	201	127(63.2)	74(36.8)	1	
Number of family members	Upto 4	231	141(61)	90(39)	0.979(0.488-	1.000
	More than	39	24(61.5)	15(38.5)	1	
Birth Order	One	159	106(66.7)	53(33.3)	1.763(1.072-	**0.031***
	Two or	111	59(53.2)	52(46.8)	1	
Mass media Exposure on MCH services	Exposed	264	162(61.4)	102(38.6)	1.588(0.315-8.02)	0.593
	Not Exposed	6	3(50)	3(50)	1	
Decision making for seeking health	Self	38	25(65.8)	13(34.2)	1.264(.615-2.596)	0.593
	Others	232	140(60.3)	92(39.7)	1	
Enabling factors						
Pregnancy registration	Early	249	156(62.7)	93(37.3)	2.237(0.908-5.510)	0.10
	Delayed	21	9(42.9)	12(57.1)	1	
Type of delivery	Normal	165	92(55.8)	73(44.2)	0.552(0.330-0.926)	**0.02***
	Caesarean	105	73(69.5)	32(30.5)	1	
Place of delivery	Public	108	72(66.7)	36(33.3)	1.484(0.894-	0.08
	Private	162	93(57.4)	69(42.6)	1	
Received Govt conditional Cash transfer	Received	146	79(54.1)	67(45.9)	0.521(0.315-	**0.01***
	Not received	124	86(69.4)	38(30.6)	1	
Nearest health facility	Within 3	246	146(59.3)	100(40.7)	0.384(0.13-1.06)	**0.04***
	More than 3 kms	24	19(79.2)	5(20.8)	1	
Mode of	Own	22	12(54.5)	10(45.5)	0.745(0.310-	0.50

transport	Hired/	248	153(61.7)	95(38.3)	1	
Transport cost per Health facility visit	<100	188	113(60.1)	75(39.9)	0.86(0.509-1.485)	0.68
	>=100	82	52(63.4)	30(36.6)	1	
ICDS utilisation	Yes	104	60(57.7)	44(42.3)	0.792(0.480-	0.37
	No	166	105(63.3)	61(36.7)	1	
Need factors						
Desire for the pregnancy	Desired	240	156(65)	84(35)	4.333(1.90-9.88)	**0.001***
	Undesired	30	9(30)	21(70)	1	
Previous Poor pregnancy outcomes	Yes	36	23(63.9)	13(36.1)	1.146(0.553-	0.85
	No	234	142(60.7)	92(39.3)	1	
High risk pregnancy	Yes	62	40(64.5)	22(35.5)	1.207(0.661 -2.170)	0.56
	No	208	125(60.1)	83(39.9)	1	
Intranatal complications	Yes	7	7(100)	0	∝(0.93-∝)	0.08#
	No	263	158(60.1)	105(38.9)	1	
Postnatal complications	Yes	14	9(64.3)	5(35.7)	1.154(0.576- 3.542)	0.520##
	No	255	156(61.2)	99(38.6)	1	

*Significant (p< 0.05), # after Continuity Correction, ## By Fishers exact test

Table 6.8.1 shows the association of Adequate Postnatal Care with the influencing factors by Univariate analysis. The odds of Adequate Postnatal Care was significantly higher mothers with birth order one, mothers who had delivered by Caesarean section, mothers who had benefitted by assistance from Government's

conditional cash transfer schemes, Mothers with nearest health facility> 3 Kms, and mothers who had desire for the pregnancy.

There was no significant association between Adequate postnatal care and Mothers age at childbirth, Mother's education, Mother's working status, religion, Community, Socioeconomicclass, Husband's education, occupation, Number of familymembers, Mass media exposure on MCH services,Mothers decision making power for seeking health, Mode and cost of transport to health facility,Place of delivery, Mode and cost of transport, ICDS Utilisation, High Risk pregnancy, Intranatal and postnatal complications**.**

Table 6.8.2: Association of Adequate Postnatal care with the selected factors by Multivariate Logistic Regression

Variable	Category	AOR	Confidence Interval	P value
Birth Order	One	1.26	0.73-2.19	0.40
	Two or more	1		
Distance of health facility	Within 3 kms	0.37	0.13-1.08	0.07
	More than 3 kms	1		
Govt conditional Cash transfer scheme assistance	Received	0.69	0.38-1.23	0.2
	Not Received	1		
Desire for the Pregnancy	Desired	3.33	1.37-8.12	**0.008***
	Undesired	1		
Type of delivery	Normal	0.72	0.39-1.32	0.29
	Caesearean	1		

*Significant (p< 0.05)

Table 6.10.2 shows the Multivariate logistic regression exploring the association of Adequate postnatal care with the influencing factors which had a

statistically significant association by univariate analysis. Desire for the pregnancy was the only factor which showed a statistically significant association with Adequate postnatal care after logistic regression. Mothers who had desired for their pregnancy had 3.33 times more odds of seeking adequate postnatal care compared to mothers who didn't not have desire for their pregnancy.

7. DISCUSSION

Health seeking behavior of women with regard to pregnancy and childbirth has a significant impact on the wellbeing of the mother and the child. Exploring the health seeking behavior of women in the reproductive age group and identification of the various contributory factors which facilitate or impede such behavior is vital in improving the utilisation of MCH services in a region. Hence the current study was carried out to assess the health seeking behavior of women during their antenatal, intranatal and postnatal period and to determine the factors influencing their health seeking behavior in a rural area of Coimbatore.

Of the total 309 mothers who delivered in the last one year in all the 14 villages of Vedapatti, the field practice area of Rural Health Training Centre (RHTC) attached to the Department of Community Medicine, PSG Institute of Medical Sciences and Research, Coimbatore, 39 were excluded. So totally 270 eligible mothers were enrolled in the study. Overall participation rate is 87.3%. A validated semi-structured questionnaire was used to the collect the information pertaining to the factors influencing the health seeking behavior of mothers during their antenatal, intranatal and postnatal period of the recent pregnancy within one year.

7.1 HEALTH SEEKING BEHAVIOUR OF WOMEN DURING THEIR ANTENATAL, INTRANATAL AND POSTNATAL PERIOD:

7.1.1. Details of various Antenatal, Intranatal and Postnatal care received by the study participants:

Majority of the study participants had received most of the maternal services. Almost all of them (96.7%) had their Mother and Child Protection card. This was in consistence with NFHS 4 reports[16] which found that 90% of mothers had their MCP card during survey. Only 63.3% of mothers were dewormed during their antenatal period**.** The proportion of mothers who had at least one Ultrasound abdomen during their antenatal period is 99.6% which reflects the better accessibility of MCH services in the area. However, the mothers who were told about the danger signs of pregnancy was only 50.3%. The proportion of mothers who breastfed their new born within one hour of birth was only 44.1% which was similar to the NFHS 4[16] results which showed that only 41.1% mothers breastfed within one hour of birth in Tamilnadu. The proportion of mothers who did not give prelacteals like Honey or sugar water to the child was only 46.3%. Family planning counselling was given only to 45.1% of mothers in their postnatal period. Inspite of the availability of 108 ambulance services, it was utilised only by 6.75% of mothers. From table 6.6, it is evident that the proportion of mothers who delivered by caesarean section was 38.9 % which was higher than NFHS 4[16] results which showed that 12.9% of mothers had delivered by Cesearean section.

7.2. Full Antenatal care:

The proportion of mothers who sought Full Antenatal carein our study is 84.8% (95% CI - 80.8% -89.05).The coverage of full antenatal care in India in rural areas was 16.7% and 43% in Tamilnadu according to NFHS 4 report[16]. In the current study,

Full antenatal care consists of a minimum of four Antenatal visits, consumption of at least 100 iron Folic acid tablets or more and getting at least one dose of Tetanus toxoid during pregnancy. In DLHS 4, the proportion of mothers in Coimbatore who had more than three antenatal visits was 78.9% whereas in our study it was 95.4%. The proportion of mothers who had at least one Tt injection in Coimbatore district was89.4% according to DLHS 4[102]compared to 99.6% in our study. The proportion of mothers who had institutional delivery in Coimbatore is 100% in DLHS 4[102]which was similar to our study. The better full antenatal care coverage in our study could be due to factors like

- Higher female literacy rate in Coimbatore (78.9%) than the female literacy rate of Tamilnadu(73.1%) which thereby makes mothers better understand the need for seeking full antenatal care[104]
- The availability of many health facilities (Public and Private) in and around the catchment area of our rural health training centre.
- Conditional cash transfer schemes by the Government which acts as a supportive factor making it mandatory for all mothers to avail the minimum and basic maternal health services like pregnancy registration, minimum four antenatal check-ups including Tt immunisation, blood and urine tests, at least one ultrasound examination, delivery in institution and immunisation.[105]
- The efficient outreach and maternal health services offered by the RHTC and the Community health workers in the area
- Ongoing urbanisation of the rural areas of the district[106] making advanced health services easily accessible.

7.3. **Safe delivery:**

The proportion of mothers who had Safe delivery in our study is 100% which is almost similar to the state average of 99.8% according to the Family Welfare statistics by the Ministry of health and Family Welfare, Government of India[108].This could be due to reasons like availability of Government health facilities and many private health facilities within the study area, better transport facilities, higher literacy rate in Tamilnadu and conditional cash transfer schemes which promotes institutional delivery. The results are also consistent with the Tamilnadu state NFHS 4 results which report that 99.8% are institutional deliveries and 99% are SBA assisted deliveries in the state.[16]H

7.4 Adequate Postnatal care:

The proportion of mothers who sought Adequate Postnatal care is 61.1% (95% CI 56.9% -65.2) in our study. Our results are consistent with the District level Household survey 2013-14 Tamilnadu state reports, 63.1% of mothers had received postnatal care within two weeks of delivery. The proportion of mothers who receive postnatal care in Tamilnadu as per the NFHS 4 report[16] was 73.8%. However the operational definition in NFHS 4 for postnatal care was "postnatal care within two days of delivery". The inadequate postnatal care received by the mothers can be due to reasons like relative inattention to mother's health compared to child's health in postnatal period, postnatal visits being not made mandatory by health facilities and conditional cash transfer schemes.However, inspite of 100% institutional deliveries in the study area, majority of the mothers have not initiated breastfeeding within one hour of birth and more than half of them have given prelacteals like honey and sugar water and the reasons for this demands further research.

7.5. FACTORS INFLUENCING HEALTH CARE SEEKING BEHAVIOUR AMONG WOMEN DURING THEIR ANTENATAL, INTRANATAL AND POSTNATAL PERIOD

7.5.1. PREDISPOSING FACTORS:

7.5.1.1. Maternal Age at childbirth:

Full Antenatal Care:

Maternal age at childbirth is an independent predictor of antenatal care. As age increase the health care sought by mother decreases. The current study did not show statistical significance between maternal age at child birth and full antenatal care by multivariate analysis after adjusting for confounding variables (aOR 1.54; 95% CI 0.59-4.03).This finding was consistent with a similar study by **Chauhan RC[108] et al** in Pondicherry which also did not show significant association of antenatal health seeking behavior with maternal age. However a study by **Prusty RK[29]84 et al** in Odisha showed mothers in the age group of 25-34 years had significantly higher odds of utilizing antenatal services.(aOR 1.2695%CI 1.10–1.45).

Adequate Postnatal care:

There was no statistically significant association between maternal age at childbirth and Adequate postnatal care in our study. However this is consistent with a study by **Singh N[88] et al** in Telengana which did not show a significant association between maternal age and postnatal care.

7.5.1.2. Mother's education:

Full Antenatal Care:

Better educated mothers have higher awareness on maternal health services and hence education has e a positive influence in seeking antenatal care. The current study did not show a statistically significant association between mother's education and full antenatal care. However studies like **Prusty RK et al** [29]in Odisha by analyzing DLHS 3 data (aOR 2.23, 95% CI 1.74–2.84) and **Chakraborty et al**[97] in Bangladesh have shown a significant association between maternal education and antenatal care by multivariate analysis.(a OR 1.842, 95% CI 1.115–3.043).

Adequate Postnatal care:

Education has a positive influence on postnatal service utilization also. A study by Pandey K et al has shown that mothers who had higher education had ten times more odds of seeking postnatal care (a OR = 9.857). However the current study did not find a statistically significant association between mother's education and adequate postnatal care.

7.5.1.3. Mothers working status:

Full antenatal care:

Mothers who are not working tend to utilize antenatal health services more than working mothers as evident from studies. A study by **Pandey K et al**[83]which is an analysis of NFHS 3 data has shown that non-working women have higher odds of using antenatal services than working women (aOR = 1.33) But however the current study has not shown statistically significant difference between mothers' working status and full antenatal care. Studies by **Paudel DP** [72] **et al** in Belgaum, **Nisar et al**[109] **i**n Karachi have reported similar results in their studies where there was no association between mothers working status and antenatal care.

Adequate Postnatal care:

The current study did not find statistically significant association between working status and adequate postnatal care. Similarly studies by **Rawat et al[79]** in Bihar, **Jat et al[76] in Madhya Pradesh** also did not find statistically significant association between mothers working status and postnatal care.

7.5.1.4. Religion:

Full antenatal care:

Culture and practices vary in different religions which influence the maternal health care seeking behavior of women. Studies by **Singh A et al[80]** , **Singh PK et** al[73] and **Battacharjee et al[49]** have shown that religion is significantly associated with full antenatal care. The current study did not show statistical significance between religion and Full Antenatal care. Studies by **Paudel DP et al[72]** in Belgaum in Karnataka and **Navaneetham et al[77]** In Southern Indiaalso showed similar results.

Adequate Postnatal care:

Religious practices also have an influence on postnatal care as evident from studies. But the current study did not show statistical significance between religion and adequate postnatal care. Studies by **Jat et al[76] in Madhya Pradesh, Paudel DP etal[72]** in Karnataka, **Singh A et al[80] (DLHS 3)** and**Navaneetham**et al[77] In Southern India also showed similar results.

7.5.1.5. Community:

Full Antenatal Care:

The current study results comply with the "inverse care law"[110] which states that availability of medical care and facilities varies inversely with the need for it

among the population served. The current study has found that Community has a statistically significant association with Full Antenatal care in univariate and multivariate analysis. Mothers who belonged to OC/BC/MBC communities had 2.8 times higher odds of seeking full antenatal care than mothers of SC/ST communities.(aOR 2.83, 95% CI 1.19-6.71) This is consistent with study by **Singh A et al**[80] by analysing DLHS 3 data showed mothers of other castes (non SC/ST) had two times more odds of utilising Full antenatal acre than SC/STmothers.(aOR = 1.77, 95% CI = 1.73-1.81)

Adequate Postnatal care:

A Study by **Kumar et al** has shown a statistically significant association between community and postnatal care (aOR= 1.74, 95% CI= 1.69-1.78). However the current study did not show any statistically significant association between community and Adequate postnatal care which was consistent with a study by **Singh A et al**[80] based on DLHS 3 data which did not find significant association between community and postnatal care.

7.5.1.6. Husband's Education:

Full Antenatal Care:

Studies has shown that health seeking behaviour was more among mothers having educated husband. A study by **P Kumar et al**[41] has shown a statistically significant association between husband's education and antenatal care (a OR= 2.41, 95% CI= 1.47-3.12) A study by **Pandey KK et al**[83] has shown a statistically significant association between husband's education and antenatal care .However the current study did not show statistically significant association between Husband's Education and Full Antenatal Care.

Adequate Postnatal care:

A study by **Rawat et al**[79] showed a statistically significant association between husband's education and adequate postnatal care (aOR 0.54, 95% CI 0.326 - 0.894). The current study did not show a statistically significant association between husband's educational status and adequate postnatal care. However our results are consistent with studies by **Yatnatti et al**[85]in Bagalkot, in Belgaum, Karnataka which also did not find any significant association with husband's education similar to our study.

7.5.1.7. Husband's Occupation:

Full Antenatal Care:

A study by **Chakraborty et al**[97] has shown significant association between husband's occupation and full antenatal care (aOR1.840, 95% CI 1.260–2.686.) However the current study did not show a statistically significant association between husband's educational status and Full antenatal care. This is consistent with the study by **Pandey KK et al**[83]in Uttar Pradesh which did not find any significant association with husband's occupation and full antenatal care similar to our study.

Adequate Postnatal care:

However the current study did not show a statistically significant association between husband's educational status and Full antenatal care. This is consistent with the study by **Pandey KK et al**[83] in Uttar Pradesh , **Sharma et al**[111]in Madhya Pradesh which similarly did not find any significant association with husband's occupation and Adequate Postnatal care.

7.5.1.8. Socioeconomic status:

Full Antenatal Care:

Socioeconomic status has a contributory role in health seeking behaviour of the mother during antenatal period. Studies by **Kumar P et al[41], Singh A et al[80], Rawat et al[79]** have shown a statistically significant association between socioeconomic status and full antenatal care. The current study found a statistically significant association between socioeconomic class and full antenatal care in Univariate analysis. Mothers of higher socioeconomic classes (Class I, II, III) have 4.3 times higher odds of seeking full antenatal care than mothers who belong to lower Socioeconomic classes (Class IV, V). (aOR 4.30 , 95% CI 0.96-19.22).However it was not significant when subjected to multivariate analysis due to the effect of the confounding variables.

Adequate postnatal care:

A study in Madhya Pradesh in 2008 by **Jat et al [76]**showed thatmothers from therichest class in the study had nine times more likely to avail postnatal care within two weeks of delivery OR= 8.28 (7.33-9.36).However the current study did not find a statistically significant association between socioeconomic class and adequate postnatal care. This is consistent with a study by **Singh A etal[80]** which did not show a statistically significant association between socioeconomic class and adequate postnatal care.

7.5.1.9. Number of family Members:

Full Antenatal care:

A study by **Babalola et al[33]**in Haiti has shown a statistically significant association between number of family members in a mother's house hold and seeking full antennal care. The current study has shown that Mothers with less than four members in family were 1.5 times more likely to seek antenatal care than mothers

who had family's more than four members but however it was not significant by Multivariate analysis. (aOR= 1.52, 95% CI 0.52- 4.40) This is consistent with study by **Singh N et al** [88]in Telengana which also did not findstatistical significance between number of family members and full antenatal care.

Adequate postnatal care:

Mothers from larger families have lesser chances for seeking postnatal care owing to time and other constraints. A study **by Paudel DP etal**[72] showed that had significant association with adequate postnatal care and the number of members in the household. (aOR2.017, 95% CI 1.089–3.739**).** However the current study did not find any association between the number of family members and adequate postnatal care.

7.5.1.10. Birth Order:

Full Antenatal care:

Studies by **Pandey KK et al**[83] **and Bhattacherjee et al**[49] have shown that mothers with first birth order were more likely to avail antenatal services than mothers with higher order birth. The current study has found a statistically significant association between birth order and full antenatal care by univariate analysis. (OR 3.329, 95% CI 1.65-6.69). However it was not significant after multivariate analysis (aOR=1.81, 95% CI 0.7-4.4).

Adequate postnatal care:

Birth order is an influential factor in seeking postnatal care also. A study by **Pandey KK et al**[83]has found a statistically significant association between birth order

and postnatal care. Mothers who had higher birth order had less chances of seeking postnatal care than mothers of first birth order.(aOR=0.68, CI 0.563-0.821) However the current study did not find any significant association between and adequate postnatal care due to smaller sample size when compared to study by **Pandey KK et al[83].**

7.5.1.11. Mass Media exposure on MCH services:

Full Antenatal care:

The current study has found a statistically significant association between mass media exposure on MCH services and Full antenatal care by both univariate and multivariate analysis. Mothers who were exposed to mass media messages on MCH services had thirteen times more odds of seeking full antenatal care when compared with their counterparts. (a OR = 13.66. 95% CI 1.01-184.6)A study by **Singh A et al[80]** in 2008 in all Indian districts has shown that mothers who had exposure to mass media messages on MCH services have two times more odds of receiving full antenatal care than other mothers who have no exposure. (aOR = 2.052, CI 1.414 - 2.977)

Adequate postnatal care:

Mass media exposure plays a facilitatory role in seeking postnatal care. A study by **Singh PK et al**[73] showed that mothers who were exposed to mass media were more likely to seek postnatal care than mothers not exposed.(aOR = 1.230 95% CI 1.044–1.449).However the current study did not find any significant association between mass media exposure and adequate postnatal care.

7.5.1.12. Decision making for seeking health:

Full Antenatal care:

Decision making by the mother herself about seeking health is an important attribute in maternal health seeking behaviour. A study by **Hou X et al**[112] in Pakistan has shown that mothers have the decision making authority had 4.2 times more odds of seeking antenatal care (aOR=4.2) and 2.3 times more odds of seeking and postnatal care (aOR = 2.3). However the current study did not find any statistically significant association between decision making power of mothers in seeking health and Full antenatal care.

Adequate postnatal care:

Decision making power influences the postnatal health seeking of mothers also. Studies by **Ghose et al**[84] have shown that there is significant association between women s autonomy and postnatal care seeking behaviour. However the current study did not find any statistically significant association between decision making power of mothers and seeking adequate postnatal care. This is in consistence with findings of **Singh PK et al**[73]where there was no statistical significance between decision making power and postnatal care. (aOR= 1.1060, 95% CI 0.926–1.320)

7.5.2. ENABLING FACTORS:

7.5.2.1. Pregnancy registration:

Full Antenatal care:

Mothers who register their pregnancy early have abetter scope for seeking full antenatal care than mothers who register late. The current study shows that mothers who had registered early had 5.15 times higher odds of seeking full antenatal care than mothers who registered late. Pregnancy registration is found to have a statistically significant association with Full antenatal care by multivariate analysis (aOR= 5.15, 95% CI 1.49-17.77).Similar results have been reported by **Singh PK et**

al[73] who showed that early pregnancy registration was statistically significant by multivariate analysis.

Adequate postnatal care:

The current study did not find statistically significant association between early registration of pregnancy among mothers and adequate postnatal care. This is in consistence with findings of study by **Singh PK et al**[73]which showed that there was no statistical significance betweenregistration of pregnancy among mothers and adequate postnatal care

7.5.2.2. Accessibility to health facility:

Full Antenatal care:

A Study done by **Rani Met al**[113]in four south Indian and four north Indian states has shown a statistically significant association between accessibility to health service and full antenatal care. However there was no statistically significant association between accessibility to health service and full antenatal care in in the current study which was consistent with study by **Chandoik et al**[114] which showed similar results.

Adequate postnatal care:

Accessibility of health services plays facilitatory role in seeking postnatal care. The current study found a statistical significant association between accessibility to health service and adequate postnatal visit by univariate analysis but not by multivariate analysis. This is in consistence with a study by **Paudel DPet al**[72] in Belgaum which did not have a statistical significant association between accessibility to health service and adequate postnatal visit.

7.5.2.3. Mode of transport:

Full Antenatal care:

A study by **Shahjahan e**t al[115] has shown a statistically significant association between mode of transport and full antenatal care by univariate analysis. However the current study did not find a statistical significant association between mode of transport and full antenatal care.

Adequate postnatal care:

A study by **Shariff A et al**[89] by analysing the rural household survey data in 1994 has found that access to public transport services is a significant factor which influences postnatal service utilisation. However the current study did not find any statistically significant association between mode of transport and adequate postnatal care.

7.5.2.4 Transport cost per health facility visit:

Full Antenatal care:

Studies in literature show that inexpensive transport cost facilitates maternal health service utilisation.(**Jose JA et al** [48]) The Belgaum study by **Paudel DP et al**[72]**has** found that mothers who spent < Rs 40 as transport cost were more likely to seek antenatal care than mothers who spent > Rs 40 (aOR 3.37 95% CI 1.643-6.925). However current study did not find any statistical significance between transport cost and Full antenatal care.

Adequate postnatal care:

High transport cost to health facilities for postnatal visits can be a barrier for availing postnatal services. A Study by **Titaley CR et al[116]** in Indonesia has shown that transportation costs are one of reasons for inability to attend postnatal check up by the mother. The current study however did not find any statistical significance between transport cost and adequate postnatal care.

7.5.2.5. ICDS utilisation:

Full Antenatal care:

The study did not show statistically significant association between ICDS utilisation and Full antenatal care.However, studies by **Agarwal M[15] and Shariff Aet al**[89in] have reported that mothers who utilised ICDS services were more likely to utilise maternal health services than mothers who did not utilise ICDS.

Adequate postnatal care:

The study did not show statistically significant association between ICDS utilisation and Adequate postnatal care. ICDS utilisation was not a contributory factor for seeking adequate postnatal care in the current study.

7.5.2.6. Benefit from Govt's conditional cash transfer schemes:

Full Antenatal care:

There is scarcity of studies in India to find the influence of conditional cash transfer schemes on antenatal care. A study by **Lim S et al[117]** which analysed DLHS 2 and 3 has shown that JSY has a significant impact on antenatal care. However the

current study did not show a statistically significant association between Benefit from Govt's conditional cash transfer schemes and full antenatal care.

Adequate postnatal care:

The current study has shown a statistically significant association between benefit from conditional cash transfer schemes and adequate postnatal care by univariate analysis. However it was not significant when subjected to multivariate analysis.

7.5.2.7. Type of delivery

Adequate postnatal care:

Studies done by**Mohan et al**[98] in and **Limenih MA at al**[92]which have reported that mothers who delivered by Caeserean section have higher odds of utilising postnatal services.However the current study did not show a statistically significant association between type of delivery and adequate postnatal care after multivariate analysis.

7.5.2.8. Place of delivery

Adequate postnatal care:

A **Quality evaluation study of NRHM**[118] by the Planning Commission of India found that mothers who delivered in private facilities were more likely to go for postnatal check within 6 weeks (85%) when compared to mothers who delivered in public health facilities (76%). However the current study did not find any statistically significant association between Place of delivery and adequate postnatal care.

7.5.3. NEED FACTORS:

7.5.3.1 .Desire for the Pregnancy

Full Antenatal care:

Studies by **Singh A et al [80] Chauhan BG et al[108]** reported that mothers with desire for the pregnancy had higher odds of seeking antenatal care and had a statically significant association with full antenatal care. Desire for the pregnancy is found to have a statistically significant association with full antenatal care byunivariateanalysis in the current study. However it was not significant when subjected to multivariate analysis.

Adequate postnatal care:

Desire for the pregnancy is found to have a statistically significant association with adequate postnatal care by univariate and multivariate analysis in the current study. (aOR= 3.33,95% CI 1.37-8.12).Similar results were given by a study by **Chauhan BG et al**[108]by NFHS 3 data which showed that odds of seeking postnatal care was higher in mothers who had a 'wanted" child than mothers who had an 'unwanted' child.

7.5.3.2.High Risk Pregnancy

Full Antenatal care:

A study by **Chakraborty et al[96]** has shown a statistically significant association between high risk pregnancy and antennal care.(aOR=2.195, 95% CI 1.514–3.183).In the current study High Risk Pregnancy is found to have a statistically significant association with Full antenatal care by univariate and multivariate analysis in the current study. (aOR = 7.81, 95% CI 1.57 – 38.75).Mothers who had High Risk Pregnancies had 7.8 times more odds of seeking full antenatal care than mothers who did not have high Risk Pregnancies.

Adequate postnatal care:

There was no significant association between High Risk Pregnancy and adequate postnatal care in the current study. This is in consistence with studies like **Gogoi et al[96]** and **Chakraborty et al[97]** which reported similar results.

7.5.3.3. Previous poor pregnancy outcomes (Abortion/ Still Birth)

Full Antenatal care:

Studies by **Chakraborty et al[97] in Nepal**,**Yunus et al[119]** in Pakistan reported that mothers with previous history of abortion or still birth had higher odds of seeking maternal healthcare and showed a significant statistical association between Previous poor pregnancy outcomes and full antenatal care. (aOR = 2.195, 95% CI 1.514–3.183),(AOR 1.51, 95%CI 1.25-1.82).However the current study did not find any statistically significant association between Previous poor pregnancy outcomes and Full antenatal care .

Adequate postnatal care:

There was no significant association betweenprevious poor pregnancy outcomesand adequate postnatal care in the current study. A study by **Bhatia JC et al[120]** in Karnataka has shown similar results where previous history of still births and abortion was not significantly associated with postnatal care.

7.5.3.4. Intranatal Complications

Adequate postnatal care:

Studies by **Roy S et al[121], Gogoi et al[96,] Zelalem Ayele et al[122]**reported that mothers who had intranatal complications had higher odds of utilising postnatal health services. However the current study did not show statistically significant association between presence of intranatal complications and adequate postnatal care.

7.5.3.5. Postnatal Complications:

Adequate postnatal care:

A study by **Mohan D et al**[98] has reported that mothers who had postnatal complications had higher odds of utilising maternal health services than mothers who did not have postnatal complications. However the current study did not find any statistically significant association between presence of postnatal complications and adequate postnatal care

8. SUMMARY

Inspite of many National Health Programmes and Initiatives on Maternal health, still maternal mortality and morbidity tend to remain high in India compared to the developed countries. This has been contributed by poor health seeking behaviour and thereby underutilisation of the available maternal health services by women of reproductive age group in our country.

Hence the current study was carried out to assess the health seeking behaviour among women during their antenatal, intranatal and postnatal period and to determine the factors influencing their health seeking behaviour in the field practice area of Rural Health Training Centre (RHTC) attached to the Department of Community Medicine, PSG Institute of Medical Sciences and Research, Coimbatore.

Sample size for the current study was based on proportion of mothers who sought Full antenatal care as determined by NFHS-4 survey and it was estimated to be around 266. All mothers who had given birth in the previous one year in all the 14 villages were visited with the help of House hold survey database of the RHTC.

Out of the total 309 mothers 39 mothers were excluded and 270 mothers participated in the study. After consent was obtained,the mothers were interviewed using avalidated semi-structured questionnaire and the information pertaining to the health seeking behaviour during their antenatal, intranatal and postnatal period and factors influencing it were collected. Data entry was done on Microsoft Excel software and analysis was done withSPSS-23 computer package. The association between the influencing factors and health seeking behavior of women in terms of Full antenatal care and adequate postnatal care was assessed by univariate analysis using chi-square

test and odds ratio was estimated. Those factors found significant by univariate analysis were further subjected to multivariate logistic regression analysis to identify independent influential factors that were significantly associated with the health seeking behavior of women in terms of Full antenatal care and adequate postnatal care.

The study shows in Table 6.3 that majority of the mothers have received most of the maternal health services. However, only 63.3% mothers were dewormed, breast examination was carried out at least once in only 19.6% of mothers, 66.7% of them had been told about birth preparedness, only 44.1% of mothers have initiated breast feeding within one hour, only 31.8% of them were told about newborn danger signals and only 6.7% of women have used the 108 services. Also, only 34.8 % of mothers received counselling on family planning methods during their antenatal period and 45.1% of mothers have received counselling on family planning methods during their postnatal period.From table 6.6, it is evident that the proportion of mothers who delivered by caesarean section was 38.9 % which was higher than NFHS 4[16] results which showed that 12.9% of mothers had delivered by Cesearean section.

In the current study, Full antenatal care was defined as mothers who had Minimum four antenatal care visits, Consumed minimum 100 iron folic acid tablets or more and received at least one tetanus toxoid injection. Safe delivery was defined as mothers who had an institutional delivery assisted by a skilled birth attendant. Adequate postnatal care was defined as mothers who had a postnatal visit within two weeks of delivery. The proportion of mothers who had Full antenatal care in the current study was **84.8 % (CI 80.8 % -89.07 %),** the proportion of mothers who had **Safe delivery**

was 100% andthe proportion of mothers who had **Adequate postnatal care** was **61.1% (CI 56.9% -65.2 %).**

In **univariate analysis**, the odds of women seeking **Full antenatal care** was found to be significantly higher among those mothers whose age at time of childbirth was <30 years, mothers who belonged to communities other than SC/STs , mothers who belonged to higher socioeconomic status (Class I,II,III of Modified Prasad's Classification),mothers who belonged to families having upto 4 members, mothers with birth order one, mothers who had done early registration, mothers who had desire for their pregnancy, mothers who had high risk pregnancy and mothers who were exposed to mass media messages on MCH services.When further subjected to **multivariate logistic regression** it was found that factors like Community, Pregnancy registration, High Risk pregnancy and mass media exposure on MCH services were statistically significant ($p< 0.05$). It was found that

1. Mothers who belonged to OC/BC/MBC communities had 1.54 times higher odds of seeking Full Antenatal care when compared to mothers who belong to SC/ST Community.
2. Mothers who registered their pregnancy early (within 3 months) had 5.15 times more odds of seeking Full antenatal care when compared to mothers who had registered their pregnancy late (more than 3 months).
3. Mothers who had High risk pregnancies had 7.8 times more odds of seeking Full antenatal care when compared to mothers who had did not have High risk pregnancies.

4. Mothers who had exposure to Mass media messages on MCH services had had 13.66 times more odds of seeking Full antenatal care when compared to mothers who had did not have exposure to Mass media messages on MCH services.

In **univariate analysis**, the odds of women seeking **adequate postnatal care** was found to be significantly higher among mothers with birth order one, mothers who had delivered by Caesarean section, mothers who had benefitted by assistance from Government's conditional cash transfer schemes, Mothers with nearest health facility > 3 Kms, and mothers who had desire for the pregnancy. When further subjected to **multivariate logistic regression** it was found that desire for the pregnancy was the only factor which showed a statistically significant association withadequate postnatal care. It was found that mothers who had desire for their pregnancy had 3.33 times more odds of seeking adequate postnatal care compared to mothers who didn't not have desire for their pregnancy.

These findings can assist policy makers to address bottlenecks in availing maternal health services by women and provide insights for designing new interventions to improve the health seeking behaviour and thereby reducing maternal morbidity and mortality.

9. LIMITATIONS

1. There could have been possibility of certain degree of recall bias since information was collected retrospectively. Attempts to minimise recall bias like cross checking the responses with their MCH cards were done but a few mothers did not have any medical records at the time of interview.

2. The sample size was calculated based on the percentage of utilisation of maternal health services based on NFHS results. This sample size was not adequate to find out association between certain factors like distance, decision making power of women and the utilisation of full antenatal acre, safe delivery and adequate postnatal care.
3. Certain qualityrelated factors of the health care system like waiting time, health personnel attitude which influences health seeking behaviour of women were not studied.
4. Being a cross sectional study, the causal relationship between the dependent and independent variables could not be ascertained.

10. RECOMMENDATIONS

1. Mothers should be educated more on the importance of antenatal visits, benefits of regular consumption of IFA tablets and initiation of breastfeeding within one hour of delivery, benefits of family planning methods for birth spacing and on the availability of 108 ambulance services.

2. Postnatal visits may be made a mandatory criteria for conditional cash transfer schemes which could improve the postnatal health care seeking behaviour of women.
3. The disparities in the uptake of maternal health services by socially marginalised and poorer women should be focussed and measures to be taken to improve their MCH service utilisation.
4. Further awareness about the benefits of utilising the ICDS Centre to improve maternal health should be brought about since the proportion of mothers who took services from the ICDS centres were low in the study area.
5. The study also revealed that only 19.6% of mothers had undergone breast examination during their antenatal visits. Breast examination should be done as a routine part of Antenatal check-up as this averts breastfeeding problems like inverted or retracted nipple in the immediate postnatal period with regard to the health of the newborn.
6. The caesarean delivery rate (39%) is more than expected in the study population which has scope for further research.

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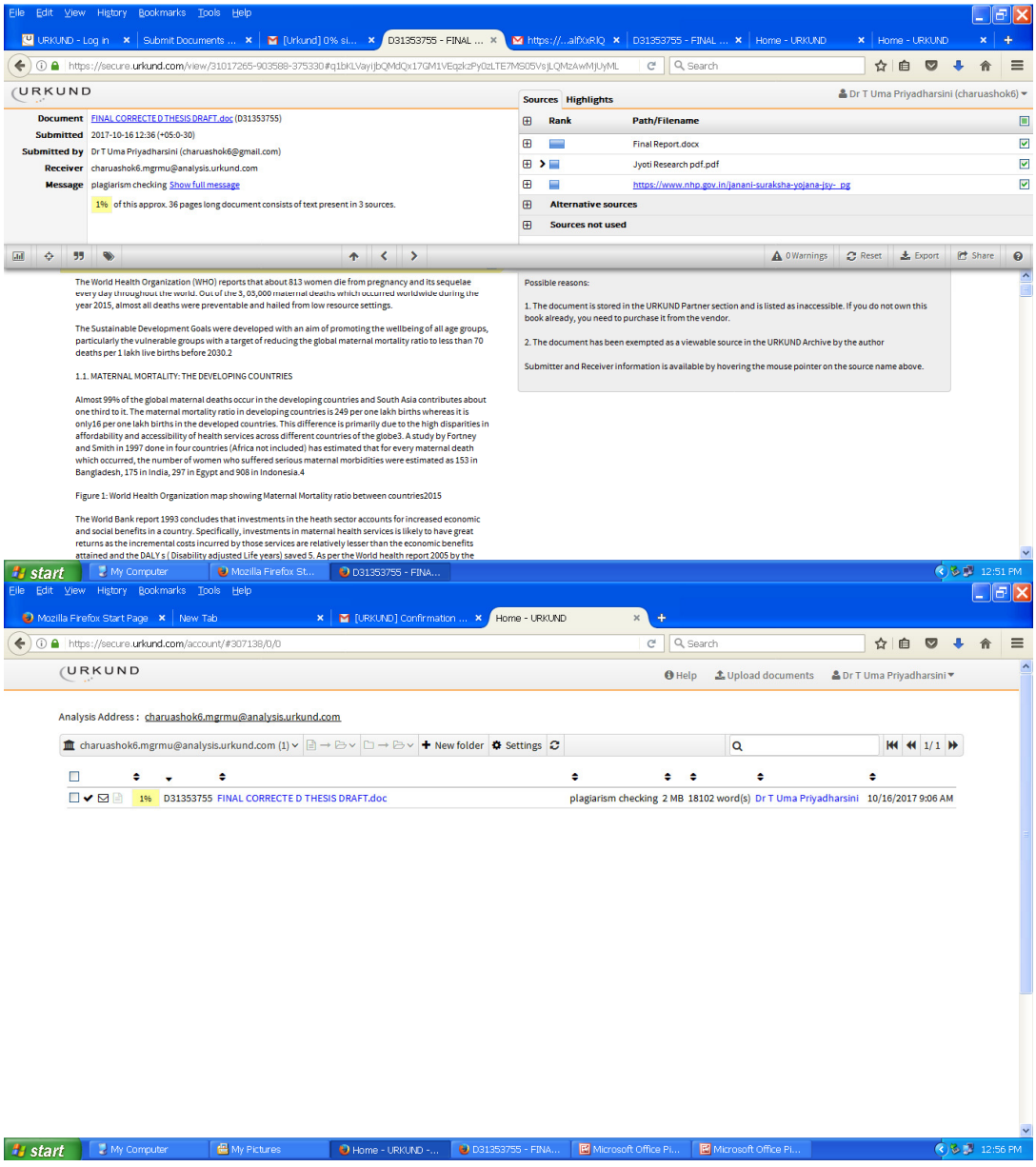
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PSG Institute of Medical Sciences & Research
Institutional Human Ethics Committee

Recognized by The Strategic Initiative for Developing Capacity in Ethical Review (SIDCER)
POST BOX NO. 1674, PEELAMEDU, COIMBATORE 641 004, TAMIL NADU, INDIA
Phone : 91 422 - 2598822, 2570170, Fax : 91 422 - 2594400, Email : ihec@psgimsr.ac.in

To
Dr T Uma Priyadharsini
Postgraduate
Department of Community Medicine
Guide: Dr M Sivamani
PSG IMS & R
Coimbatore

Ref: Project No.15/404

Date: April 21, 2017

Dear Dr Uma Priyadharsini,

Institutional Human Ethics Committee, PSG IMS&R reviewed and discussed your application dated 19.12.2015 to conduct the research study entitled *"Health seeking behaviour of women during their antenatal, intranatal and postnatal period in a rural area of Coimbatore district: A community based cross-sectional study"* during the IHEC meeting held on 24.12.2015.

The following documents were reviewed and approved:

1. Project Submission form
2. Study protocol (Version 1 dated 19.12.2015)
3. Informed consent forms (Version 1 dated 19.12.2015)
4. Data collection tool (Version 1 dated 19.12.2015)
5. Current CVs of Principal investigator, Co-investigators
6. Budget

The following members of the Institutional Human Ethics Committee (IHEC) were present at the meeting held on 24.12.2015 at IHEC Secretariat, PSG IMS & R between 10.00 am and 11.00 am:

Sl. No.	Name of the Member of IHEC	Qualification	Area of Expertise	Gender	Affiliation to the Institution Yes/No	Present at the meeting Yes/No
1	Mr. R. Nandakumar	BA., BL	Legal Expert, Chairperson	Male	No	Yes
2	Dr. S. Bhuvaneshwari (Member-Secretary, IHEC)	MD	Clinical Pharmacology	Female	Yes	Yes
3	Dr. S. Shanthakumari	MD	Pathology, Ethicist	Female	Yes	Yes
4	Dr D Vijaya	M Sc., Ph D	Basic Medical Sciences (Biochemistry)	Female	Yes	Yes

The study is approved in its presented form. The decision was arrived at through consensus. Neither PI nor any of proposed study team members were present during the decision making of the IHEC. The IHEC functions in accordance with the ICH-GCP/ICMR/Schedule Y guidelines. The approval is valid until one year from the date of sanction. You may make a written request for renewal / extension of the validity, along with the submission of status report as decided by the IHEC.

ANNEXURE - III

PSG Institute of Medical Science and Research, Coimbatore
Institutional Human Ethics Committee
INFORMED CONSENT FORM

I **Dr.T.Uma PriyaDharsini** carrying out a study on the topic:

"Health seeking behaviour of women during their antenatal, intranatal and postnatal period in a rural area of Coimbatore district"as part of my research project being carried out under the aegis of the DEPARTMENT OF COMMUNITY MEDICINE.

My research guide is: DR.THOMAS V. CHACKO and DR. ISWARYA

The justification for this study is:

Apart from non-availability or poverty of services, one reason behind increased maternal mortality may be non-utilization of such services by the mothers. Various factors are operative:

1) **Women lack awareness** of the importance of pregnancy care and delivery/taking place in a healthcare facility (poor health education).

2) **Women's lack of decision**- making power within the family (gender bias).

3) **Lack of awareness of location** of health services (poor health awareness).

4) **Cost:** direct fees as well as the cost of transportation, drugs and supplies (poverty).

5) The **poor quality of service**s, including poor treatment by health providers also makes some women reluctant to use services.

To improve maternal health, barriers that limit access to quality maternal health services must be identified and addressed at all levels of the health system.

.Also, doing quality assessment of the services offered serves as an administrative tool for monitoring performance and finding the existing lacunae in the maternal health care system in the community. Hence this study aims at exploring the factors which influence the pattern of health care utilization in a rural area of Coimbatore.

The objectives of this study are:

Primary Objectives:

- To assess the health seeking behavior among women in their antenatal, intranatal and postnatal period in the field practice area of RHTC, Vedapatti, Coimbatore district.
- To study the factors associated with the seeking behavior among women in their antenatal, intranatal and postnatal period in Vedapatti.

Study volunteers / participants are All married women of reproductive age group (15-49 yrs) who delivered in previous 1 year

Location: Field Practice Area of RHTC, Vedapatti

We request you to kindly cooperate with us in this study. We propose collect background information and other relevant details related to this study. We will be carrying out:

Self-administered questionnaire (specify approximate duration): 30 minutes

Data collected will be stored for a period of FIVE years. We will not use the data as part of another study.

Health education sessions: No. of sessions 1. Duration – 1 minutes (for the needed)

If **photograph** is taken, purpose: FOR DISSERTATION PURPOSE

Benefits from this study:

By finding health seeking behavior and utilization of maternal health service Utilisation and its associated factors in our practice area it will help us to know the burden of this problem and plan necessary awareness and health education services to reduce the underutilisation.

By knowing the association between factors which influence the health seeking behavior and antenatal, intranatal and postnatal care, it would assist in giving priority to areas where lacunae are there in health service availability and accessibility.

Risks involved by participating in this study:NO RISK

How the **results** will be used: FOR DISSERTATION AND PUBLICATION.

If you are uncomfortable in answering any of our questions during the course of the interview you **have the right to withdraw from the interview / study at anytime.** You have the freedom to withdraw from the study at any point of time. Kindly be assured that your refusal to participate or withdrawal at any stage, if you so decide, will not result in any form of compromise or discrimination in the services offered nor would it attract any penalty. You will **NOT** be paid any remuneration for the time you spend with us for this interview / study. The information provided by you will be kept in strict confidence. Under no circumstances shall we reveal the identity of the respondent or their families to anyone. The information that we collect shall be used for approved research purposes only. You will be informed about any significant new findings - including adverse events, if any, – whether directly related to you or to other participants of this study, developed during the course of this research which may relate to your willingness to continue participation.

Consent: The above information regarding the study, has been read by me/ read to me, and has been explained to me by the investigator/s. Having understood the same, I hereby give my consent to them to interview me. I am affixing my signature / left thumb impression to indicate my consent and willingness to participate in this study (i.e., willingly abide by the project requirements).

Signature / Left thumb impression of the participant:

Signature of the Interviewer with date: Witness:

Contact number of PI : 994014266

Contact number of Ethics Committee Office : 0422 2570170 Extn : 5818

பூ.சா.கோ. மருத்துவக்கல்லூரி மற்றும் ஆராய்ச்சி நிறுவனம், கோவை

மனித நெறிமுறைக்குழு

ஒப்புதல் படிவம்

தேதி: 18.12.2015

மரு.து.உமா பிரியதர்சினி ஆகிய நான், பூ.சா.கோ. மருத்துவக்கல்லூரியின் / மருத்துவமனையின் சமூகவியல் மருத்துவத் துறையின் கீழ், **"மகப்பேறு மற்றும் அதன் முன் பின் காலங்களில் பெண்களின் மருத்துவசேவை நாடும் தன்மைகள் மற்றும் காரணிகள்"** என்ற தலைப்பில் ஆய்வு மேற்கொள்ள உள்ளேன்.

என் ஆய்வு வழிகாட்டி (மாணவர்களுக்கு மட்டும்): **மரு. தாமஸ்.வி.சாக்கோ, எம்.டி.**
பேராசிரியர், சமூகவியல் மருத்துவத்துறை

ஆய்வு மேற்கொள்வதன் அடிப்படை:

இந்தியாவில் பிரசவத்தின்போதும் அதன்மூலம் ஏற்படும் சிக்கல்களாலும் ஏற்படும் இறப்புகளின் எண்ணிக்கை 141/1,00,000 ஆக உள்ளது. (உலக சுகாதார நிறுவனத்தின் கணிப்பு 2015). இந்திய பெண்களின் பிரசவ கால மருத்துவ சேவை நாடும் தன்மை பல்வேறு சுய காரணிகளாலும், நம் நாட்டின் பல்வேறு சமூக, கலாச்சார காரணிகளாலும் தீர்மானிக்கப்படுகிறது. ஆகவே பிரசவ முன்பின் காலங்களில் பெண்களின் மருத்துவ சேவை நாடும் தன்மையையும் அதன் காரணிகளையும் ஆய்வு செய்தல் இன்றியமையாததாகக் கருதப்படுகிறது.

ஆய்வின் நோக்கம்:

1. மகப்பேறு முன் பின் காலங்களில் பெண்களின் மருத்துவ சேவை நாடும் தன்மையை கண்டறிதல்
2. மகப்பேறு காலங்களில் பெண்களின் மருத்துவ சேவை நாடும் தன்மையை தீர்மானிக்கும் காரணிகளைக் கண்டறிதல்
3. சேவைகளின் தரத்தை ஆய்வு செய்தல்.

ஆய்வில் பங்கு பெறும் நபர்களின் எண்ணிக்கை : கடந்த ஓராண்டுக்குள் பிரசவித்த தாய்மார்கள்- சுமார் 230

ஆய்வில் பங்கு பெறுவோர் மற்றும் வயது : வேடப்பட்டி கிராமப்பகுதியில் கடந்த ஓராண்டிற்குள் பிரசவித்த தாய்மார்கள் 15 முதல் 49 வரை

ஆய்வு மேற்கொள்ளும் இடம் : பூ.சா.கோ. மருத்துவக்கல்லூரியின் கிராம சுகாதார மையத்தின் பயிற்சி சேவை பகுதி, வேடப்பட்டி.

இந்த ஆய்வில் எங்களுடன் ஒத்துழைக்குமாறு கேட்டுக்கொள்கிறோம். நாங்கள் சில தகவல்களை இந்த ஆய்விற்காக சேகரிக்க உள்ளோம்.

முதன்மை நேர்காணல் : 20 நிமிடங்கள்

இந்த ஆய்வில் கிடைக்கும் தகவல்கள் 5 வருடங்கள் பாதுகாக்கப்படும்.

<u>ஆய்வில் பங்கு பெறுவதால் ஏற்படும் பலன்கள்:</u>

பிரசவ முன்பின் காலங்களில் எடுக்க வேண்டிய மருத்துவ சிகிச்சைகளின் முக்கியத்துவம் பற்றி தாய்மார்களுக்கு எடுத்துரைக்கப்படும். அக்காலத்தில் மேற்கொள்ளவேண்டிய உணவு, சுகாதாரம் மற்றும் சிகிச்சை முறைகள் குறித்து நலக்கல்வி அளிக்கப்படும்.

ஆய்வின் முடிவுகள் எந்த முறையில் பயன்படுத்தப்படும்?

இந்த ஆய்வின் கேள்விகளுக்கு பதிலளிப்பதால் உங்களுக்கு ஏதேனும் அசௌகரியங்கள் இருந்தால், எந்த நேரத்தில் வேண்டுமானாலும் ஆய்விலிருந்து விலகிக்கொள்ளும் உரிமை உங்களுக்கு உண்டு. எப்பொழுது வேண்டுமானாலும் ஆய்விலிருந்து விலகும் உரிமை உங்களுக்கு உள்ளது. நீங்கள் அளிக்கும் தகவல்கள் இரகசியமாக வைக்கப்படும்.

<u>ஆய்வுக்குட்படுபவரின் ஒப்புதல்:</u>

இந்த ஆய்வைப் பற்றிய மேற்கூறிய தகவல்களை நான் படித்து அறிந்து கொண்டேன் / ஆய்வாளர் படிக்கக் கேட்டுத் தெரிந்துக் கொண்டேன். ஆய்வினைப் பற்றி நன்றாகப் புரிந்து கொண்டு இந்த ஆய்வில் பங்கு பெற ஒப்புக்கொள்கிறேன்.

இந்த ஆய்வின் மூலம் பெறும் மருத்துவ ரீதியான குறிப்புகளை வரும் காலத்தில் உபயோகப்படுத்திக் கொள்ளவும் முழு மனதுடன் சம்மதிக்கிறேன். இந்த ஆய்வில் பங்கேற்பதற்கான எனது ஒப்புதலை கீழே கையொப்பமிட்டு / கை ரேகை பதித்து நான் தெரிவித்துக் கொள்கிறேன்.

பங்கேற்பாளரின் பெயர், முகவரி :

பங்கேற்பாளரின் கையொப்பம்/கை ரேகை/சட்டப்பூர்வ பிரதிநிதியின் கையொப்பம்:

தேதி :

ஆய்வாளரின் கையொப்பம் :

தேதி :

ஆய்வாளரின் தொலைபேசி எண்.: 99401 42266

மனித நெறிமுறைக்குழு அலுவலகத்தின் தொலைபேசி எண்:

அலுவலக நேரத்தில் : 0422 2570170 Extn.: 5818

அலுவலக நேரத்திற்குப்பின் : 9865561463

ANNEXURE - IV

QUESTIONNAIREID No:

DEMOGRAPHIC PROFILE

1. Name of the mother :

2. Age :

3. Address :

4. Education :

1. Illiterate	2. Primary school	3. Middle school
4. High school	5. Higher secondary	6. Graduate

5. Occupation of the mother :

6. Husband's Age :

7. Husband's Education :

1. Illiterate	2. Primary school	3. Middle school
4. High school	5. Higher secondary	6. Graduate

8. Husband s Occupation :

9. Religion :

1. Hindu	2.Christian	3. Muslim	4.Others

10. Caste : OC/ BC/MBC/SC/ST

SOCIO-ECONOMIC FACTORS

11. Type of Family : 1. Nuclear family 2. Extended family

12. Total no of family members :

13. Total monthly income of the family :

MATERNAL FACTORS

14. How many children do you have : ____

15. Do you have historyof Abortions or stillbirth (dead born child) ? : Yes / No
:

16. When you got pregnant last time, did you have desire to get pregnant at that time? Yes / No

17.Place of delivery: Government ☐ ivate ☐)thers ☐

(Specify): ……

18. Birth Weight (kg)…….

About the Antenatal care for your pregnancy

19. Did you undergo Pregnancy confirmation test (urine test) during the last pregnancy?

Yes / No 20. Did you register your last pregnancy?Yes / No

21. During which month did you register your pregnancy?

1. WITHIN THREE MONTHS INTO PREGNANCY	2. AFTER THREE MONTHS INTO PREGNANCY

22. Who registered your pregnancy?

1	2	3	4
Govt Doctor	Pvt Doctor	ANM/VHN	Anganwadi worker

23. Did you receive a Mother and Child Protection Card after registration?

1.YES	2.No

24.. During the previous pregnancy did you receive any antenatal care?

1.YES	2.No

IF NO, PROBE) (SPECIFY)

25. How many months pregnant were you when you received your first antenatal check up?

----------MONTHS

26. How many times you received antenatal checkup during the last pregnancy?

NUMBER OF TIMES ……..… (If less than 4 answer next question else go to question number 26)

27. Why did you not go for at least 4 antenatal checkups?

A	NOT NECESSARY	1
B	NOT CUSTOMARY	2
C	COST TOO MUCH	3
D	TOO FAR/NO TRANSPORT	4
E	POOR QUALITY SERVICE	5
F	FAMILY DID NOT ALLOW	6
G	LACK OF KNOWLEDGE	7
H	NO TIME TO GO	8
I	OTHER/ _____	9

28. Where did you receive antenatal care for last pregnancy?

1	2	3	4	5	6
Govt Hospital	Pvt Hospital	Primary health centre	Health Sub Centre	Private clinic	OTHERS

29. Which is the nearest health facility near your residence?..

30. How much is the distance of the health facility from your house?..... Kms

31. Who takes the decision for attending antenatal checkups and deciding about place of delivery?

1.SELF	2.HUSBAND	FAMILY

32.. During this pregnancy, did you take any drug for intestinal worms? Yes/No

33. During the whole pregnancy, for how many days /months did you take iron tablets or syrup?-

……..

34. During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?

YES	NO

IF YES

NO OF TIMES	DON'T KNOW

35. As part of your antenatal care during last pregnancy, were the following done at every visit?

		YES	NO
A	Weight measured	1	2
B	Height measured	1	2
C	Blood pressure checked	1	2
D	Blood tested	1	2
E	Urine tested	1	2
F	Abdomen examined	1	2
G	Breast examined	1	2

36. .As part of your antenatal care during last pregnancy, were the following done at every visit ?

		YES	NO
A	Sonogram or Ultrasound done	1	2
B	Delivery date told	1	2

C	Delivery advice given	1	2
D	Nutrition advice given	1	2

37. During (any of) your antenatal visit (s), did you receive advice on the following at least once?

		YES	NO
A	Breastfeeding	1	2
B	Keeping the baby warm/ Cord care	1	2
C	The need for cleanliness at the time of delivery	1	2
D	Family planning	1	2
F	nutrition for you and child	1	2
G	Need for Institutional Delivery	1	2

38. During your last pregnancy did you suffer from any of the following health problems?

	YES	NO
A. SWELLING OF HANDS, FEET AND FACE ……..	1	2
B. PALENESS / GIDDINESS/WEAKNESS...	1	2
C. VISUAL DISTURBANCES…….....	1	2
D. EXCESSIVE FATIGUE ……	1	2
E. CONVULSIONS NOT FROM FEVER…….	1	2
G. ABNORMAL POSITION OF FOETUS…..	1	2
H. MALARIA. ……..	1	2
J. HYPERTENSION / HIGH BP…….	1	2
K. JAUNDICE…….	1	2
L. EXCESSIVE BLEEDING…….	1	2
M. OTHER_____	1	

39. Did you receive any supplementary nutrition from the ICDS centre during pregnancy?

YES/ NO

About the Intranatal care for your pregnancy

40. What was the baby s birth weight? ----------

< 2.5 kg	>2.5 kg
1	2

41. During delivery, did you experience any of the following problems?

	YES	NO
A. Did you experience labour pain before your due date?	1	2
B. Did you experience excessive bleeding? ……..…	1	2
C. Was the labour prolonged? (More than 12 Hours)	1	2
E. Did you experience breech presentation? ……..…	1	2
F Did you experience fits /High B.P? ……..…	1	2
G. Any Other? ……..…	1	2

42. Was the delivery normal or caesarean or assisted (forceps/Vacuum)?

NORMAL..... 1

CAESAREAN¸..... 2

BY INSTRUMENT OR ASSISTED ……..... 3

43. How long after birth did you first put your baby to the breast...

HOURS ☐ DAYS ☐

44. How much it cost you for the transportation to the health facility for delivery?

RUPEES ☐ NO COST PAID ☐

45. How much in total did it cost you out of your pocket for this delivery?

COST……. | | | | | | | Rs

46.. Did you receive any Govt. financial assistance for delivery care under the Janani Suraksha Yojana (JSY) / State Specific Scheme? (Muthulaksmi Reddy Maternity Benefit Scheme)

JSY	MLR	BOTH	OTHERS
1	2	3	4

About the Postnatal care for your pregnancy

47. Were you told about the danger signs of newborn after delivery and before discharge?

YES/NO

48... Did you go for a postnatal visit within two weeks of delivery?

49. Did any of the following happen when you had the postnatal check-up:

	YES	NO
A. Was your abdomen examined?	1	2
B. Did you receive advice on breastfeeding?	1	2
C.Did you receive advice on baby care?	1	2
D. Did you receive advice on family planning?	1	2
E. Any Other?	1	2

50. During the first 6 weeks after delivery did you experience any symptoms like fever, Abdominal pain.foul smelling discharge,headache with blurred vision? YES/NO

51. In the first three days after delivery, was (NAME) given anything to drink other than breast milk?

YES	NO
1	2

52. Is the child immunized till date...

YES	NO
1	2

ஆய்வு படிவம்

1. பெயர் : அடையாள எண் :

2. வயது :

3. முகவரி :

4. மதம் : ☐ இந்து ☐ கிறிஸ்தவம் ☐ முஸ்லீம்
☐ மற்றவை

5. வகுப்பு : ☐ பிற்படுத்தப்பட்டவர் ☐ மிகவும்
பிற்படுத்தப்பட்டவர்
☐ ☐
தாழ்த்தப்பட்டவர் மற்றவை

6. கல்வித்தகுதி : ☐ படிக்கவில்லை ☐ ஐந்தாவது ☐
எட்டாவது
☐
☐ பத்தாவது ☐ பன்னிரண்டாவது
கல்லூரி
☐
பட்டமேற்படிப்பு

7. தொழில் : சுயதொழில் ☐ மாத வருமான வேலை ☐
வேலையில்லை ☐ மற்றவை ☐

8. கணவர் வயது : < 25 ☐ 26 – 35 ☐
36-45 ☐ >45 ☐

9. கணவர் கல்வித்தகுதி: சுயதொழில் ☐ மாத வருமான வேலை ☐
வேலையில்லை ☐ மற்றவை ☐

10. குடும்பத்தின் வகை : தனி ☐ கூட்டுக்குடும்பம் ☐

11. குடும்பத்தின் மொத்த நபர் எண்ணிக்கை :

2	3	3-5	>5

12. குடும்ப மொத்த வருமானம் :

13. உங்களுக்கு எத்தனை குழந்தைகள் உள்ளனர்? :

14. குழந்தை பிறக்கும்
போது உங்கள் வயது என்ன?:

15. இதுவரை ஏதேனும் கருக்கலைப்பு நடந்துள்ளதா? | 1. ஆம் | 2. இல்லை | :

16. ஏதேனும் குழந்தை உங்களுக்கு இறந்து பிறந்ததா? | 1. ஆம் | 2. இல்லை | :

பிரசவத்திற்கு முன் கவனிப்பு

17. முந்தைய பிரசவத்தில் நீங்கள் கருவுற்றிருப்பதைஎப்போது அறிந்து கொண்டீர்கள்?

1.	முதல் மூன்று மாதத்திற்குள்
2.	மூன்று மாதத்திற்குப்பின்

:

18. சிறுநீர் கொண்டு கர்ப்ப பரிசோதனை செய்யப்பட்டதா? | 1. ஆம் | 2. இல்லை | :

19. உங்களுடைய பிரசவம் பதிவு செய்யப்பட்டதா? எந்த | 1. ஆம் | 2. இல்லை | மாதத்தில் :

20. பதிவு செய்தது யார்? : [ ] அரசு மருத்துவர் [ ] யார் மருத்துவர்

[ ] கிராம சுகாதார செவிலியர் [ ] மற்றவர்

21. முதல் கர்ப்ப பரிசோதனை உங்களுக்கு எந்த மாதம் செய்யப்பட்டது? :

22. கடந்த பிரசவ காலத்தில் உங்களுக்கு : எத்தனை முறை கர்ப்ப பரிசோதனை செய்யப்பட்டது?

23. கர்ப்ப பரிசோதனை செய்யப்பட்ட இடம்?

[ ] அரசு மருத்துவமனை [ ] அரசு ஆரம்ப சுகாதார நிலையம்

☐ அரசு துணை சுகாதார நிலையம் ☐ தனியார் மருத்துவமனை

☐ மற்றவை

24. கர்ப்ப பரிசோதனையின்போது கீழ்கண்ட பரிசோதனைகள் குறைந்தபட்சம் ஒருமுறையாவது செய்யப்பட்டதா?

		ஆம்	இல்லை
1.	எடை பரிசோதனை	1	2
2.	உயரம்	1	2
3.	இரத்த அழுத்தப் பரிசோதனை	1	2
4.	இரத்தப் பரிசோதனை	1	2
5.	சிறுநீர் பரிசோதனை	1	2
6.	கர்ப்பப்பை பரிசோதனை	1	2
7.	மார்பகப் பரிசோதனை	1	2
8.	ஸ்கேன் பரிசோதனை	1	2
9.	குழந்தை பிறக்கும் தேதி கூறப்பட்டதா?	1	2
10.	சத்துணவு பற்றி கூறப்பட்டதா?	1	2
11.	நிகோடின் புகையால் குழந்தைக்கு நேரும் பின்விளைவுகள் கூறப்பட்டதா?	1	2
12.	பிரசவத்தின் போது ஏற்படும் பிரச்சனைகள் பற்றி கூறப்பட்டதா?	1	2

25. கருவுற்றிருக்கும்போது ஏதேனும் பிரச்சனைகள் நேர்ந்தால் செல்ல வேண்டிய இடம் (மருத்துவ கவனிப்பு) பற்றி கூறப்பட்டதா?

1. ஆம்	2. இல்லை

26. கர்ப்ப காலத்தில் எத்தனை முறை கர்ப்ப பரிசோதனை செய்யப்பட்டது? :

27. கர்ப்ப காலத்தில் ஏதேனும் ஒரு பரிசோதனையின் போதாவது கீழ்கண்ட அறிவுரைகள்

வழங்கப்பட்டதா?

1.	தாய்ப்பால் மட்டுமே அளித்தல்	1	2
2.	குழந்தையை கதகதப்பாக வைத்தல்	1	2
3.	பிரசவத்திற்கு பின் தன் சுத்தம் பேணுதல்	1	2
4.	குடும்ப கட்டுப்பாட்டு முறைகள்	1	2
5.	மருத்துவமனை பிரசவம்	1	2

28. எத்தனை இரும்ப சத்து மாத்திரைகள் / மருத்து வழங்கப்பட்டது?:

29. கர்ப்ப காலத்தில் நீங்கள்மொத்தம் எத்தனை மாத்திரைகள்

உட்கொண்டீர்கள்? :

30. உங்கள் பிரசவ காலத்தில் ஒரு டெட்டனஸ் ஊசியாவது :

அளிக்கப்பட்டதா?

1. ஆம்	2. இல்லை

31. எத்தனை? :

32. கர்ப்ப பரிசோதனையின் தரம் எவ்வாறு இருந்தது?

36. நன்றாக செய்யப்பட்டது	2. சுமாராக செய்யப்பட்டது.	3. அவசரமாக செய்யப்பட்டது

33. நீங்கள் ஏன் மூன்று கர்ப்ப பரிசோதனைகளுக்கு செல்லவில்லை?

ஆம்

இல்லை

1.	தேவையில்லை	1	2
2.	பழக்கமில்லை	1	2
3.	அதிக பணம் செலவாகும்	1	2
4.	தொலைவு	1	2
5.	சேவை சரியில்லை	1	2
6.	விவரம் தெரியவில்லை	1	2

7.	குடும்பத்தார் அனுமதிக்கவில்லை	1	2
8.	நேரமில்லை	1	2
9.	மற்றவை	1	2

34. உங்களின் கர்ப்ப பரிசோதனைக்கு செல்ல ஊக்குவித்தவர் யார்?

மருத்துவர் ☐ கி.சு.செ ☐ கணவர் ☐ மற்றவர் ☐

தாய் ☐ உறவினர் ☐ தான் ☐

35. கடந்த பிரசவ காலத்தில் கீழ்கண்ட ஏதேனும் பிரச்சனைகள் தங்களுக்கு இருந்ததா?

		ஆம்	இல்லை
1.	கைகால் வீக்கம்	1	2
2.	வெளிறிய முகம்	1	2
3.	பார்வை கோளாறு	1	2
4.	இரத்த அழுத்தம் அதிகரிப்பு	1	2
5.	அதிக உதிரப்போக்கு	1	2
6.	வலிப்பு	1	2

36. அங்கன்வாடி மையத்தில் இருந்து இணை உணவு வழங்கப்பட்டதா?

1. ஆம்	2. இல்லை

37. பிரசவம் நடைபெற்றபோது கீழ்கண்ட ஏதேனும் தங்களுக்கு இருந்ததா?

		ஆம்	இல்லை
1.	குறை பிரசவம்	1	2
2.	அதிக உதிரப்போக்கு	1	2
3.	சிசு தலை திரும்பி இருத்தல்	1	2
4.	வலிப்பு / அதிக இரத்த அழுத்தம்	1	2
5.	மற்றவை	1	2

38. தங்களுடைய பிரசவம் எத்தகையது?

1. சுகப்பிரசவம்	2. சிசேரியன்

39. பிரசவம் நடைபெற்ற இடம்?

அரசு மருத்துவமனை ☐ தனியார் மருத்துவமனை ☐

அரசு ஆரம்ப சுகாதார நிலையம் ☐

40. பிரசவம் பார்த்தவர் யார்?

மருத்துவர் ☐ செவலியர் ☐ மற்றவர் ☐

41. பிரசவத்தின்போது கீழ்கண்டவை செய்யப்பட்டதா?

		ஆம்	இல்லை
1.	1 மணி நேரத்திற்குள் தாய்பால் கொடுத்தீர்களா?		

42. தாங்கள் மருத்துவமனைக்கு பிரசவத்திற்காக சென்ற வாகனத்தை ஏற்பாடு செய்தவர் யார்?

கி.சா.செ ☐ கணவர் ☐ தான் ☐

43. பிரசவத்திற்காக சென்ற வாகனத்திற்கு செலவு செய்த தொகை எவ்வளவு? :

44. அரசின் பண உதவித்திட்டங்கள் கிடைத்ததா? (JSY/MLR) ஏன்?

1. ஆம்	2. இல்லை

45. சிசுவை பராமரிக்கும் முறைகள் பற்றியும் சிக்கல்கள் குறித்தும் தங்களுக்கு முன்கூட்டியே அறிவுரை கூறப்பட்டதா?

1. ஆம்	2. இல்லை

46. பிரசவத்திற்குப் பின் 48 மணி நேரத்திற்குள் உங்களுக்குபரிசோதனை செய்யப்பட்டதா?

1. ஆம்	2. இல்லை

47. பிரசவித்தபின் எத்தனை நாட்கள் கழித்து முதல் பரிசோதனை செய்யப்பட்டது?:

48. பிரசவத்திற்குப் பின் உங்களுக்கு

		ஆம்	இல்லை
1.	வயிறு மற்றும் கர்ப்பப்பை பரிசோதனை செய்யப்பட்டதா?	1	2
2.	தாய்ப்பால் பற்றிய அறிவுரை செய்யப்பட்டதா?	1	2
3.	குடும்ப கட்டுப்பாடு பற்றிய அறிவுரை வழங்கப்பட்டதா?	1	2

49. பிரசவித்த ஆறு வாரங்களில் கீழ்கண்ட ஏதேனும் உபாதைகள் தங்களுக்கு இருந்ததா?

		ஆம்	இல்லை
1.	அதிக காய்ச்சல்	1	2
2.	அடி வயிற்றில் வலி	1	2
3.	அதிக உதிரப்போக்கு	1	2

4.	வலிப்பு	1	2
5.	தலைவலி	1	2
6.	மற்றவை	1	2

50. பிரசவம் முடிந்த இரண்டு வாரத்தில் தங்கள் உடல் பரிசோதனை செய்யப்பட்டதா?

51. பிறந்த உடன் குழந்தைக்கு தேன் அல்லது சர்க்கதை தண்ணீர் கொடுக்கப்பட்டதா?

52. தங்கள் குழந்தைக்கு இன்று வரை போடவேண்டிய அனைத்து தடுப்□□சிகளும் போடப்பட்டு உள்ளதா?

Annexure V

VARIABLE	LABEL	CODING

Modified Prasad's classification

Value of Consumer Price Index – Industrial Workers (CPI – IW) for November 2016= 248 (for Coimbatore; Base 2001 =100)

The calculation as per Modified Prasad's classification was done using the following formula: Multiplication factor = $\frac{(Value of CPI X\ 4.49)\ x\ 4.93}{100}$

$= \frac{(248\ X\ 4.49)\ x\ 4.93}{100}$

= 54.90

Socio-Economic class	Modified B.G.Prasad's classification based on CPI for Coimbatore on November 2016
I	Rs 5490 and above
II	Rs 2750-5489
III	Rs 1650-2749
IV	Rs 820-1649
V	Below Rs 820

Id.no.	Identification number	1, 2, 3….
Age	Age of mother at childbirth	21, 22, 23…
Mother's education	Educational status of mother	1=illiterate, 2=primary, 3=middle, 4=high
Working status	Mother's working status	1=working, 0=not working
Husbeducation	Educational status of	1=illiterate, 2=primary, 3=middle, 4=high
Husboccu	Occupational category of	1=Unsilled,2=Semiskilled,3=Skilled,4=highly
religion	Religion practiced	1-Hindu, 2=Christian, 3=Muslim
community	Community to which mother	1=OC,2=BC,3=MBC,4=SC.5=ST
Total income	Total income of family	Numerical
Family members	Total number of members in	1,2,3..
birth order	Order of last child birth	1,2,3..
Previous bad outcome	Had abortion/ still birth	1=Yes, 0= No
desire for pregnancy	Desired the pregnancy or	1=Yes, 0= No
Type of delivery	Normal/cesearean	1=Cesarean, 0= Normal
deworming	Deworming tablet given or	1=Yes, 0= No
registime	Time of registration	1=> 3months,0= ≤3 months
Noofanchecks	Total number of AN checks	1,2,3..
Atleast4	Atleast 4 AN check ups	1=Yes, 0= No
Ifa	Consumed ifa for 100 days	1=Yes, 0= No
Atleast one tt	Had atleast one tt	1=Yes, 0= No
height	Height examination	1=Done, 0= Not done
weight	Weight measurement	1=Done, 0= Not done
abdomen	Abdominal examination	1=Done, 0= Not done
brexamination	Breast examination	1=Done, 0= Not done
birth preparedness	Informed about birth	1=Told, 0= Not told
AN nutrition advice	Given nutrition advice in	1=Given, 0= Not given
AnNbf advice	Given breastfeeding advice	1=Given, 0= Not given
AN fp advice	Given family planning advice in AN period	1=Given, 0= Not given
PN nutrition advice	Given nutrition advice in PN	1=Given, 0= Not given
PN bf advice	Given breastfeeding advice	1=Given, 0= Not given

PN fp advice	Given family planning	1=Given, 0= Not given
Told about preg danger	Told about preg danger signs	1=Yes, 0= No
Highrisk	High risk pregnancy	1=Yes, 0= No
IN complications	Intranatal complications	1=Yes, 0= No
PN complications	Postnatal complications	1=Yes, 0= No
Mode of transport	Mode of transport used	0=own vehicle,1=Hired,3=public transport,
Decision making	Decision making on seeking	1=Yes, 0= No
Icds	Utilisised ICDS	1=Yes, 0= No
Govt schemes	Received cash from conditional cash transfer	1=Yes, 0= No
Prelacteals	Given prelacteals	1=Yes, 0= No
instbirth	Had institutional delivey	1=Yes, 0= No
Fullancare	Had full antenatal care	1=Yes, 0= No
Safedelivery	Had safe delivery	1=Yes, 0= No
PN visit	Had adequate PN care	1=Yes, 0= No

ANNEXURE – VI

CODING SHEET FOR MASTER CHART

idno	age	motheducation	workingstatus	husbeducation	husboccu	religion	community	totalincome	familymembers	birthorder	previoudbadoutcome	desire for preg	typeofdelivery	deworming	registime	noofanchecks	Atleast4	ifa	AtleastoneTT	height
1	28	2	0	3	2	1	4	6000	6	4	1	1	1	1	5	3	1	1	0	0
2	37	3	1	2	1	1	2	12000	5	3	1	1	1	1	3	3	1	1	0	0
3	31	5	0	5	3	1	5	10000	4	2	0	1	1	0	3	6	0	1	0	0
4	35	2	0	2	1	1	3	8000	6	4	0	1	1	1	3	1	1	1	0	0
5	28	3	0	5	2	1	3	6000	5	2	0	1	1	0	5	3	1	0	0	0
6	26	6	0	6	3	1	4	18000	5	3	0	1	1	1	7	2	1	0	0	0
7	24	4	0	4	1	1	4	10000	3	2	0	0	1	0	3	9	0	1	0	0
8	24	5	0	6	3	1	3	15000	3	1	1	0	1	1	4	6	0	1	0	0
9	35	5	0	5	2	1	4	6000	6	4	1	1	1	1	5	3	1	1	0	0
10	21	3	0	4	3	1	3	10000	6	4	1	1	1	0	5	2	1	1	0	0
11	32	3	0	5	3	1	3	8000	5	3	1	0	1	0	3	12	0	1	0	0
12	32	4	0	5	2	1	3	6000	4	3	1	1	1	0	4	10	0	1	0	0
13	22	5	0	5	2	1	2	20000	3	1	1	0	2	1	3	8	0	1	0	0
14	33	4	0	4	1	1	4	15000	4	3	1	1	2	1	6	6	0	1	0	0
15	32	3	0	3	1	1	4	8000	4	2	1	1	1	0	4	6	0	1	0	0
16	32	4	0	5	2	1	3	12000	4	3	1	1	1	0	3	6	0	1	0	0
17	25	5	0	5	2	1	4	20000	3	1	1	0	2	1	3	9	0	1	0	0
18	31	4	0	4	2	1	3	10000	4	2	1	0	1	0	3	8	0	1	0	0
19	24	5	0	6	3	1	2	12000	3	1	1	0	1	0	3	7	0	1	0	0
50	29	4	1	6	1	1	5	10000	5	1	1	0	2	1	3	8	0	1	0	0
21	28	4	0	5	2	1	3	10000	4	2	1	0	1	0	3	6	0	1	0	0
22	26	2	0	3	1	1	3	6000	4	3	1	1	1	1	6	3	1	1	0	0
23	23	4	0	5	3	1	2	10000	4	2	1	0	1	0	3	3	1	1	0	0
24	23	6	0	5	2	1	3	10000	3	1	1	0	2	0	3	3	1	0	0	0
25	26	6	0	6	3	1	4	18000	5	3	1	0	1	1	7	2	1	0	0	0
26	23	6	0	6	2	1	4	18000	3	1	1	0	1	0	3	2	1	0	0	0
27	30	5	0	6	1	1	5	6000	4	2	1	0	2	0	3	9	0	1	0	0
28	19	4	0	1	1	1	2	10000	7	1	1	0	1	0	5	4	0	1	0	0
29	29	6	0	6	3	2	5	20000	3	1	1	0	1	1	0	9	0	1	0	0
30	32	4	0	4	2	1	2	25000	5	3	1	0	1	0	3	5	0	1	0	0
31	21	6	0	5	2	1	2	12000	5	2	1	0	2	1	3	12	0	1	0	0
32	20	6	1	6	2	1	4	30000	4	2	1	0	2	0	0	6	0	1	0	0
33	38	6	0	6	2	1	2	8000	4	1	1	0	2	1	3	15	0	1	0	0
34	20	2	0	3	1	3	4	8000	4	2	1	0	1	1	3	8	0	1	0	0
35	19	4	0	4	1	1	2	12000	4	1	1	0	1	0	1	6	0	1	0	0
36	26	6	0	6	2	1	3	14000	4	2	1	0	1	0	3	10	0	1	0	0
37	24	6	0	5	4	1	1	25000	3	1	1	0	1	1	3	8	0	1	0	0
38	31	2	0	4	2	1	2	8000	4	2	1	0	1	0	3	9	0	1	0	0

39	22	4	0	4	1	1	3	6000	3	1	1	0	1	1	0	6	0	1	0	0
40	31	6	0	6	3	1	2	13000	3	2	1	0	2	0	3	12	0	1	0	0
41	28	6	0	6	3	2	2	15000	3	1	1	0	1	1	0	12	0	1	0	0
42	26	6	0	6	2	1	2	2000	3	1	0	0	2	1	3	6	0	0	0	0
43	31	3	0	6	2	1	2	8000	5	2	0	0	1	0	3	9	0	0	0	0
44	29	4	0	5	2	1	3	6000	4	2	0	0	1	0	3	6	0	0	0	0
45	22	4	0	5	2	1	3	8000	3	1	0	0	2	0	4	12	0	0	0	0
46	23	4	0	4	2	1	3	7000	3	1	0	0	1	0	3	8	0	0	0	0
47	26	3	0	4	1	1	3	12000	4	2	0	1	1	0	3	6	0	0	0	0
48	31	4	0	4	2	1	4	10000	4	2	0	1	1	1	2	8	0	0	0	0
49	21	5	0	4	1	1	2	21000	3	2	0	0	2	0	3	9	0	0	0	0
50	32	6	0	3	1	2	4	8000	4	2	0	1	2	0	3	6	0	0	0	0
51	23	4	0	6	2	1	3	12000	3	1	0	0	1	0	3	10	0	0	0	0
52	28	4	0	4	1	1	3	7000	4	2	0	0	2	0	3	8	0	0	0	0
53	25	4	0	5	3	1	3	8000	4	2	0	1	1	0	4	6	0	0	0	0
54	32	5	0	3	1	1	2	8000	7	3	0	1	2	1	3	10	0	0	0	0
55	30	4	0	5	2	1	2	8000	5	3	0	0	2	0	3	9	0	0	0	0
56	22	5	0	4	1	1	4	11000	3	1	0	0	2	1	0	9	0	0	0	0
57	31	6	1	6	4	1	2	55000	5	1	0	0	2	0	1	9	0	0	0	0
58	44	1	0	2	1	1	3	15000	3	1	0	0	2	1	0	12	0	0	0	0
59	31	6	0	6	3	1	2	15000	4	2	0	0	2	0	2	8	0	0	0	0
60	34	6	1	6	4	1	3	40000	10	2	0	0	1	1	6	12	0	0	0	0
61	28	6	0	5	2	1	3	15000	3	1	0	1	2	0	3	8	0	0	0	0
62	23	6	0	5	3	1	2	15000	3	1	0	0	2	1	2	10	0	0	0	0
63	19	4	0	5	2	1	1	9000	3	1	0	0	1	0	3	9	0	0	0	0
64	29	4	0	6	1	1	3	8000	3	1	0	0	1	0	3	12	0	0	0	0
65	28	5	0	5	3	1	2	25000	3	1	0	0	1	0	3	9	0	0	0	0
66	24	4	1	5	2	1	4	10000	5	1	0	0	2	0	3	8	0	0	0	0
67	31	4	0	3	1	1	2	15000	4	2	0	0	2	0	3	8	0	0	0	0
68	22	3	0	3	1	1	3	8000	3	1	0	0	2	1	3	9	0	0	0	0
69	21	6	0	6	2	1	3	8000	3	2	0	0	1	0	2	12	0	0	0	0
70	25	6	1	6	2	2	3	14000	5	1	0	0	2	0	3	7	0	0	0	0
71	28	6	1	6	2	1	3	10000	3	1	0	0	1	0	3	14	0	0	0	0
72	26	4	1	5	2	1	4	10000	3	1	0	0	1	0	3	9	0	0	0	0
73	26	4	0	5	3	1	2	12000	3	1	1	0	1	0	3	12	0	0	0	0
74	29	2	0	3	1	1	3	8000	2	2	1	0	1	0	3	6	0	0	0	0
75	30	5	0	4	1	1	2	8000	4	2	1	0	2	0	3	8	0	0	0	0
76	31	5	0	5	2	1	2	10000	6	1	1	0	1	0	3	9	0	0	0	0
77	24	6	0	6	3	1	2	40000	5	1	1	0	1	0	2	10	0	0	0	0
78	25	4	0	6	2	1	5	15000	4	2	1	0	1	1	3	10	0	0	0	0
79	22	3	0	2	1	1	3	10000	3	1	1	0	1	0	4	6	0	0	0	0
80	25	3	0	3	1	1	3	6000	4	2	1	0	1	1	3	8	0	0	0	0
82	28	4	0	4	2	1	3	7000	5	3	1	0	2	0	3	9	0	0	0	0
83	32	6	0	6	2	1	3	30000	4	2	1	0	2	1	2	10	0	0	0	0
84	23	4	1	5	2	1	3	9000	3	1	1	0	1	0	2	8	0	0	0	0
85	23	5	0	5	2	1	3	10000	3	1	1	0	1	0	3	7	0	0	0	0

86	26	5	0	5	3	1	4	6000	3	1	1	0	1	1	3	10	0	0	0	0
87	22	4	0	4	1	1	2	15000	3	1	1	0	2	0	2	12	0	0	0	0
88	27	6	0	6	3	1	2	25000	3	1	1	0	2	1	3	12	0	0	0	0
89	19	4	0	5	2	1	3	6000	3	1	1	0	2	0	3	8	0	0	0	0
90	24	4	0	5	3	1	2	10000	3	1	1	0	2	0	3	9	0	0	0	0
91	34	5	0	6	3	1	2	20000	4	2	1	0	1	0	3	10	0	0	0	0
92	22	4	0	6	2	1	2	12000	3	1	1	0	1	0	3	6	0	0	0	0
93	23	6	1	6	3	1	4	50000	4	1	1	0	2	0	3	12	0	0	0	0
94	23	6	0	6	3	1	3	20000	3	1	1	0	2	0	3	12	0	0	0	0
95	24	5	0	5	3	1	2	25000	5	1	1	0	2	0	3	8	0	0	0	0
96	25	5	0	5	2	1	3	6000	3	1	1	0	2	0	5	8	0	0	0	0
97	23	4	0	6	2	1	3	20000	4	1	1	0	1	1	3	10	0	0	0	0
98	25	5	0	6	2	1	3	12000	3	1	1	0	1	1	3	7	0	0	0	0
99	27	4	0	6	3	1	3	20000	3	1	1	0	1	0	3	8	0	0	0	0
100	25	5	0	5	2	1	2	15000	4	2	1	0	1	0	3	7	0	0	0	0
101	23	4	0	6	2	1	2	12000	4	2	1	1	1	1	3	10	0	0	0	0
102	22	3	0	5	2	1	3	10000	3	1	1	0	1	0	3	8	0	0	0	0
103	29	6	0	6	3	2	3	8000	4	2	1	0	1	0	3	6	0	0	0	0
104	19	4	0	5	2	1	3	11000	3	1	1	0	1	0	3	5	0	0	0	0
105	22	3	0	4	2	1	2	10000	6	2	1	0	1	1	3	12	0	0	0	0
106	31	4	0	6	2	1	4	15000	4	2	1	1	1	1	3	8	0	0	0	0
107	30	3	0	4	1	1	3	15000	4	2	1	0	1	0	3	7	0	0	0	0
108	23	6	0	6	2	1	2	10000	4	2	1	0	1	1	2	12	0	0	0	0
109	25	6	0	6	2	1	3	15000	3	1	1	0	1	1	2	10	0	0	0	0
110	24	5	0	5	3	3	3	10000	3	1	1	0	1	0	3	10	0	0	0	0
111	21	5	0	3	1	1	2	12000	4	2	1	1	1	1	3	12	0	0	0	0
112	23	6	0	6	2	1	2	20000	3	2	1	0	1	1	3	10	0	0	0	0
113	31	4	0	5	3	1	3	8000	4	2	1	1	1	0	3	6	0	0	0	0
114	29	4	0	4	2	1	3	10000	4	2	1	0	1	1	4	8	0	0	0	0
115	26	3	0	4	1	1	2	12000	3	1	1	0	1	1	3	10	0	0	0	0
116	29	3	0	4	1	1	5	7000	4	2	1	0	1	0	3	10	0	0	0	0
117	19	5	0	5	3	1	4	8000	3	1	1	0	1	0	3	9	0	0	0	0
118	24	6	0	6	3	1	5	15000	3	1	1	0	2	0	3	10	0	0	0	0
119	22	3	0	3	1	1	3	8000	3	1	1	0	1	0	3	10	0	0	0	0
120	33	3	0	3	1	1	2	12000	5	3	1	1	1	0	2	8	0	0	0	0
121	23	5	0	3	2	1	2	10000	3	1	1	0	1	1	3	8	0	0	0	0
122	29	6	0	6	2	1	2	15000	3	1	1	0	2	0	3	15	0	0	0	0
123	28	6	1	6	3	1	4	40000	3	1	1	0	2	0	3	12	0	0	0	0
124	26	4	0	4	1	1	2	10000	3	1	1	0	2	1	3	8	0	0	0	0
125	28	4	0	5	3	1	4	12000	3	1	1	0	2	1	3	12	0	0	0	0
126	26	4	1	4	1	1	3	10000	3	1	1	0	2	1	3	5	0	0	0	0
127	32	3	0	4	1	1	4	20000	4	2	1	0	2	0	3	12	0	0	0	0
128	25	6	0	6	3	1	2	9000	5	3	1	1	1	1	3	7	0	0	0	0
129	25	6	0	6	3	1	3	7000	3	1	1	0	1	0	3	6	0	0	0	0
130	26	2	0	3	2	1	2	20000	7	2	1	0	1	0	3	9	0	0	0	0
131	32	4	0	3	2	1	2	8000	4	2	1	0	1	1	2	6	0	0	0	0

132	24	4	0	5	3	1	5	10000	4	2	1	0	1	0	3	8	0	0	0	0
133	22	4	0	4	1	1	4	6000	3	1	1	0	1	0	3	8	0	0	0	0
134	26	5	0	6	2	1	3	10000	3	1	1	0	1	0	3	5	0	0	0	0
135	26	4	0	5	3	1	3	15000	4	2	1	0	1	0	3	9	0	0	0	0
136	26	5	0	5	3	1	3	10000	4	2	1	0	1	1	3	10	0	0	0	0
137	26	5	1	6	2	1	4	10000	3	1	1	0	1	1	3	9	0	0	0	0
138	22	3	0	3	1	1	3	6000	3	1	1	0	2	0	3	10	0	0	0	0
139	26	4	0	4	1	1	3	12000	4	2	1	0	1	0	3	9	0	0	0	0
140	24	3	0	3	1	1	3	10000	4	2	1	0	2	1	3	9	0	0	0	0
141	25	6	1	6	3	1	2	15000	3	1	1	0	2	0	3	6	0	0	0	0
142	26	6	0	6	3	1	2	15000	3	1	1	0	1	0	3	8	0	0	0	0
143	27	5	0	5	2	1	2	8000	4	3	1	1	1	0	3	12	0	0	0	0
144	26	3	0	4	1	1	2	10000	4	2	1	0	1	0	3	9	0	0	0	0
145	23	6	0	5	2	1	3	7500	3	1	1	1	1	1	3	10	0	0	0	0
146	30	6	0	6	2	1	2	25000	4	2	1	0	2	1	3	8	0	0	0	0
147	26	6	1	6	3	1	3	20000	3	1	1	0	2	0	3	9	0	0	0	0
148	27	3	0	6	2	1	3	9000	3	1	1	0	1	0	3	12	0	0	0	0
149	23	3	0	3	1	1	3	8000	3	1	1	0	1	0	3	10	0	0	0	0
150	25	4	0	3	1	1	2	10000	6	2	1	0	2	0	2	12	0	0	0	0
151	19	3	0	3	2	1	2	15000	4	2	1	0	1	1	0	10	0	0	0	0
152	31	6	0	6	2	1	2	10000	3	1	1	0	2	1	0	12	0	0	0	0
153	29	6	0	4	1	1	2	20000	4	2	1	0	2	0	3	10	0	0	0	0
154	32	4	0	5	2	1	4	9000	3	1	1	0	2	0	3	8	0	0	0	0
155	25	3	0	6	2	1	3	30000	4	2	1	0	1	0	3	7	0	0	0	0
156	27	5	0	4	3	3	3	10000	3	1	1	0	1	0	2	9	0	0	0	0
157	26	4	0	6	3	1	4	15000	5	3	1	0	1	1	3	12	0	0	0	0
158	28	6	0	6	2	1	3	20000	3	1	1	0	2	0	3	6	0	0	0	0
159	28	4	0	4	2	1	3	8000	6	1	1	0	1	0	4	10	0	0	0	0
160	22	5	0	5	3	2	4	6000	3	1	1	0	2	0	0	8	0	0	0	0
161	32	4	0	3	1	1	4	16000	4	2	1	0	2	1	2	12	0	0	0	0
162	21	4	0	5	2	1	3	13000	3	1	1	0	2	0	3	9	0	0	0	0
163	27	3	0	3	1	1	5	25000	3	1	1	0	2	1	0	8	0	0	0	0
164	23	3	0	5	3	2	3	15000	3	1	1	0	1	0	3	15	0	0	0	0
165	31	5	0	5	3	1	5	8000	4	2	1	0	1	1	3	6	0	0	0	0
166	23	6	0	5	2	1	3	12000	3	1	1	0	1	0	3	6	0	0	0	0
167	32	6	0	3	1	1	3	10000	3	3	1	0	2	0	3	8	0	0	0	0
168	24	6	0	6	2	1	3	40000	3	1	1	0	2	1	0	10	0	0	0	0
169	21	3	0	4	1	1	3	10000	3	1	1	0	2	1	3	9	0	0	0	0
170	28	5	0	5	2	1	3	20000	4	2	1	1	2	1	3	12	0	0	0	0
171	37	5	0	6	4	1	3	45000	3	1	1	0	2	0	2	12	0	0	0	0
172	24	5	0	6	4	1	2	45000	3	1	1	0	2	0	3	9	0	0	0	0
173	19	3	0	4	2	1	2	7000	3	1	1	0	2	0	3	9	0	0	0	0
174	29	6	0	3	1	1	3	15000	3	1	1	0	2	0	0	10	0	0	0	0
175	24	5	0	5	2	1	4	15000	4	2	1	0	1	0	0	9	0	0	0	0
176	37	4	0	5	2	1	2	10000	3	1	1	0	2	1	2	10	0	0	0	0
177	23	4	0	4	2	1	2	6000	3	1	1	0	2	0	3	9	0	0	0	0

178	23	5	0	5	2	1	3	6000	3	1	1	0	1	1	3	8	0	0	0	0
179	22	3	0	6	2	1	4	15000	3	1	1	0	1	1	2	8	0	0	0	0
180	26	6	0	6	2	1	2	25000	6	2	1	0	2	1	3	10	0	0	0	0
181	22	5	0	6	2	1	2	50000	6	1	1	0	2	0	3	12	0	0	0	0
182	24	5	0	6	2	1	2	30000	3	1	1	0	2	1	2	10	0	0	0	0
183	24	5	0	5	2	1	3	15000	3	1	1	0	2	0	2	10	0	0	0	0
184	26	4	0	3	2	1	4	8000	3	1	1	0	2	1	3	10	0	0	0	0
185	31	5	0	6	3	1	3	25000	4	2	1	0	2	1	2	8	0	0	0	0
186	28	6	0	5	2	1	3	20000	4	1	1	0	2	0	3	12	0	0	0	0
187	26	6	0	4	1	1	3	40000	5	2	1	0	1	0	0	12	0	0	0	0
188	24	6	0	6	3	1	1	15000	3	1	1	0	2	0	2	12	0	0	0	0
189	32	5	0	5	2	1	3	20000	4	2	1	0	2	0	3	9	0	0	0	0
190	25	5	0	5	2	1	5	8000	3	1	1	0	2	1	3	10	0	0	0	0
191	25	6	0	6	3	1	2	50000	3	1	1	0	2	0	4	10	0	0	0	0
192	27	5	0	6	3	1	3	15000	4	2	1	0	2	1	3	10	0	0	0	0
193	28	5	0	5	3	1	2	9000	3	1	1	0	2	1	2	10	0	0	0	0
194	24	5	0	5	2	1	2	15000	3	1	1	0	1	0	3	12	0	0	0	0
195	32	5	0	6	2	1	3	25000	4	1	1	1	1	0	3	9	0	0	0	0
196	31	5	0	6	2	2	4	15000	4	2	1	0	1	0	3	9	0	0	0	0
197	27	4	0	6	3	1	3	7000	4	2	1	0	1	0	3	7	0	0	0	0
198	38	2	0	3	1	1	3	10000	5	1	1	0	1	0	3	9	0	0	0	0
199	22	5	0	5	3	1	3	10000	4	2	1	0	1	1	2	8	0	0	0	0
200	32	4	0	5	1	1	2	15000	4	2	1	0	1	1	3	5	0	0	0	0
201	28	3	0	6	2	1	2	12000	5	2	1	0	1	0	2	8	0	0	0	0
202	22	5	0	5	2	1	4	6000	3	1	1	0	1	1	0	6	0	0	0	0
203	30	5	0	6	2	2	4	20000	5	1	1	0	1	0	2	10	0	0	0	0
204	29	3	0	4	1	1	3	9000	4	2	1	0	1	0	3	8	0	0	0	0
205	24	5	0	6	1	1	2	12000	3	1	1	0	1	0	3	8	0	0	0	0
206	21	5	0	4	1	1	2	15000	3	1	1	0	1	0	3	10	0	0	0	0
207	24	5	0	4	2	1	4	10000	3	1	1	0	1	0	3	12	0	0	0	0
208	26	3	0	4	1	1	2	15000	3	1	1	0	1	1	0	9	0	0	0	0
209	19	2	0	3	1	1	3	8000	3	1	1	0	2	0	1	12	0	0	0	0
210	25	4	0	4	1	1	2	12000	3	1	1	0	1	0	3	7	0	0	0	0
211	26	3	0	3	1	1	2	8000	4	1	1	0	1	0	3	8	0	0	0	0
212	24	5	0	4	1	1	3	8000	3	1	1	0	1	1	3	12	0	0	0	0
213	23	5	0	5	2	1	3	15000	3	1	1	0	1	1	3	12	0	0	0	0
214	22	6	0	6	2	1	3	20000	3	1	1	0	1	0	3	6	0	0	0	0
215	21	4	0	5	3	1	2	9000	3	1	1	0	2	0	3	5	0	0	0	0
216	32	6	0	3	1	3	2	8000	4	2	1	0	1	1	3	10	0	0	0	0
217	24	5	0	5	1	1	2	7000	3	1	1	0	1	0	3	8	0	0	0	0
218	29	6	0	6	3	1	3	6000	3	1	1	0	1	1	3	12	0	0	0	0
219	21	5	0	5	3	1	4	6000	3	1	1	0	1	0	3	10	0	0	0	0
220	21	4	0	4	2	1	4	7000	3	1	1	0	1	0	3	7	0	0	0	0
221	32	6	0	6	2	1	3	12000	3	2	1	0	1	0	2	9	0	0	0	0
222	30	4	0	4	1	1	2	12000	3	1	1	0	1	0	3	8	0	0	0	0
223	27	3	0	4	1	1	2	9000	3	1	1	0	2	0	5	9	0	0	0	0

224	22	6	0	5	2	1	3	10000	3	1	1	0	1	0	3	6	0	0	0	0
225	26	5	0	5	2	1	3	10000	4	2	1	0	1	1	0	8	0	0	0	0
226	27	6	0	6	3	1	3	15000	3	1	1	0	2	0	2	10	0	0	0	0
227	23	4	0	4	2	1	3	10000	3	1	1	0	2	1	3	9	0	0	0	0
228	33	4	0	6	2	1	3	38000	4	2	1	0	2	0	3	12	0	0	0	0
229	24	5	0	6	3	1	2	20000	3	1	1	0	2	0	2	12	0	0	0	0
230	31	4	0	4	1	1	3	7000	4	2	1	0	2	0	2	12	0	0	0	0
231	31	4	0	4	1	1	3	7000	4	2	1	0	2	1	3	12	0	0	0	0
231	32	4	0	4	2	1	5	10000	3	1	1	0	2	1	0	5	0	0	0	0
233	25	4	0	5	2	1	2	12000	3	1	1	0	1	0	3	7	0	0	0	0
234	23	6	0	6	3	1	3	12000	3	1	1	0	1	0	3	12	0	0	0	0
235	24	4	0	5	2	1	2	6000	3	1	1	0	1	1	3	8	0	0	0	0
236	24	5	0	6	2	1	2	20000	3	1	1	0	1	0	3	10	0	0	0	0
237	23	4	0	4	1	1	5	6000	3	1	1	0	1	1	3	10	0	0	0	0
238	31	6	0	6	2	1	4	25000	5	2	1	0	1	1	0	8	0	0	0	0
239	25	6	0	6	3	1	3	25000	2	1	1	0	2	0	3	9	0	0	0	0
240	24	4	0	5	2	1	2	9000	5	3	1	0	1	0	3	4	0	0	0	0
241	24	4	0	5	3	1	2	12000	3	1	1	0	1	0	3	8	0	0	0	0
242	25	4	1	5	2	1	3	7000	3	1	1	0	2	0	2	6	0	0	0	0
243	24	4	0	5	2	1	3	8000	3	1	1	0	1	0	3	6	0	0	0	0
244	32	3	0	3	1	1	5	8000	3	1	1	0	1	0	3	9	0	0	0	0
245	22	5	0	5	2	2	2	12000	3	1	1	0	1	0	3	8	0	0	0	0
246	35	3	0	4	2	1	2	10000	4	2	1	0	2	1	3	10	0	0	0	0
247	22	4	0	4	2	1	3	8000	3	1	1	0	2	0	3	12	0	0	0	0
278	24	3	1	4	2	1	3	8000	3	1	1	0	1	0	3	6	0	0	0	0
249	26	4	0	5	2	2	3	6000	3	1	1	0	1	0	3	6	0	0	0	0
250	35	3	0	4	1	1	2	9000	4	2	1	0	1	1	3	8	0	0	0	0
251	24	6	1	6	2	1	3	9000	3	1	1	0	1	0	3	6	0	0	0	0
252	25	4	0	4	1	1	2	8000	3	1	1	0	2	0	3	8	0	0	0	0
253	21	3	0	3	1	1	2	12000	3	2	1	0	1	0	3	6	0	0	0	0
254	26	5	0	5	2	1	5	9000	4	2	1	0	2	1	3	9	0	0	0	0
255	25	4	0	3	1	1	3	10000	3	1	1	0	1	0	3	10	0	0	0	0
256	29	3	1	4	2	1	3	6000	3	1	1	0	2	1	3	6	0	0	0	0
257	23	3	0	4	1	1	4	8000	4	2	1	1	1	1	3	7	0	0	0	0
258	25	3	0	2	1	1	3	8000	4	2	1	0	1	0	3	12	0	0	0	0
259	29	4	0	3	1	1	2	10000	3	1	1	0	1	0	3	8	0	0	0	0
260	22	3	0	5	2	1	2	15000	3	1	1	0	1	0	3	5	0	0	0	0
261	29	4	0	3	1	1	3	15000	4	2	1	0	2	1	3	12	0	0	0	0
262	25	4	0	6	3	1	2	12000	3	1	1	0	2	0	3	9	0	0	0	0
263	25	6	1	6	3	1	2	15000	3	1	1	0	2	0	3	10	0	0	0	0
264	24	6	0	3	1	1	2	15000	3	1	1	0	2	1	3	8	0	0	0	0
265	38	4	0	6	3	1	3	14000	3	1	1	0	2	0	3	6	0	0	0	0
266	31	6	0	5	3	1	3	20000	3	1	1	0	1	1	3	10	0	0	0	0
267	22	6	0	3	1	1	2	12000	3	1	1	0	2	1	2	12	0	0	0	0
268	21	5	0	6	2	1	2	15000	3	1	1	0	1	1	3	8	0	0	0	0
269	25	4	0	5	1	1	2	12000	4	2	1	0	1	1	0	8	0	0	0	0

270	26	6	0	3	1	1	2	15000	3	1	1	0	1	0	3	10	0	0	0	0
	33	5	0	6	2	1	2	8000	4	2	1	0	1	0	2	10	0	0	0	0